

In This Issue—Sales Keep Up With Production Gain

MOTOR AGE

Vol. XLIX
Number 15

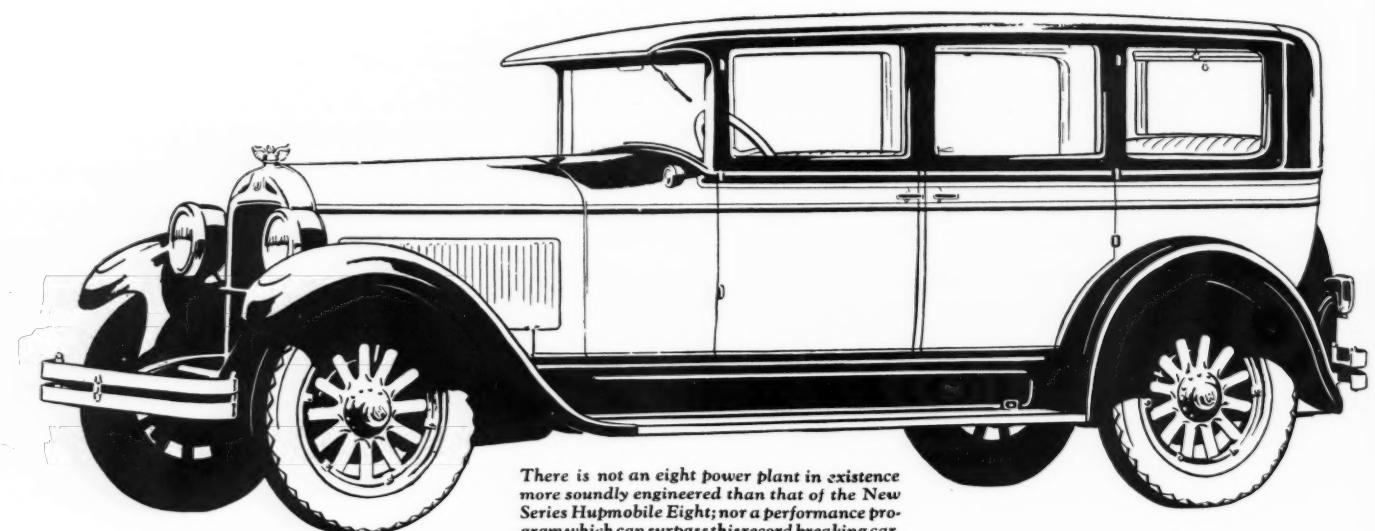
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CHICAGO, APRIL 15, 1926

Thirty-five Cents a Copy
Three Dollars a Year

**Jordan sales volume for
the six months ending
March 31st showed an
increase of 75% over
the same period a year
previous.**

**The public likes the Line
Eight Motor and the all-
steel, all-vision body.**

Edward S. Jordan
President
Jordan Motor Car Company, Inc.
Cleveland



There is not an eight power plant in existence
more soundly engineered than that of the New
Series Hupmobile Eight; nor a performance pro-
gram which can surpass this record breaking car.

**Brilliantly successful
everywhere—the two
great Hupmobiles.
No wonder you find
Hupmobile Dealers
so enthusiastic.**

HUPMOBILE

EIGHTS

and SIXES



MOON-DIANA

franchise for 1926

STABILITY

- The product of a \$75,000,000 corporation. No company has any greater buying or producing resources. The latest low prices of Moon-Diana make these cars the outstanding *quality* values of the industry.
- With no floating debts, no preferred stock, no bonded indebtedness, no liens, no mortgages of any kind on its property, the Moon Motor Car Company is an outstanding example of the principles that govern sound and successful business.
- Represent a successful company. Sell a product of high good will, of low sales resistance. Make money with Moon.

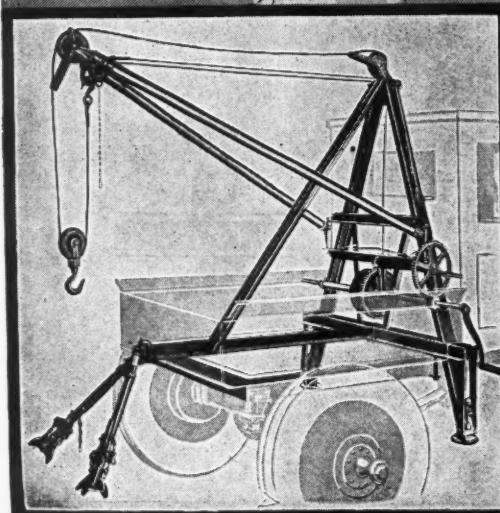
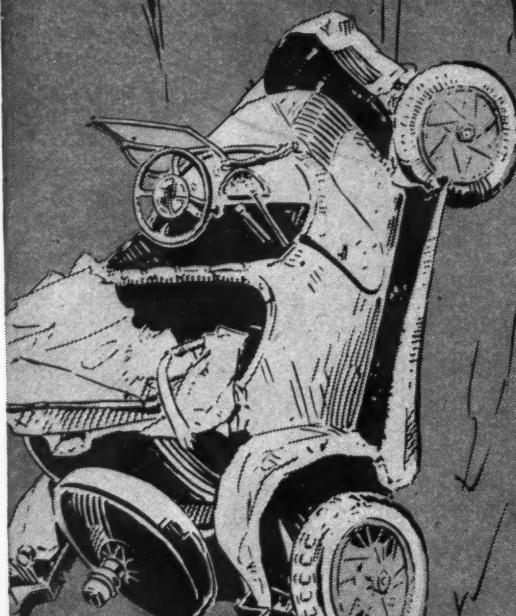
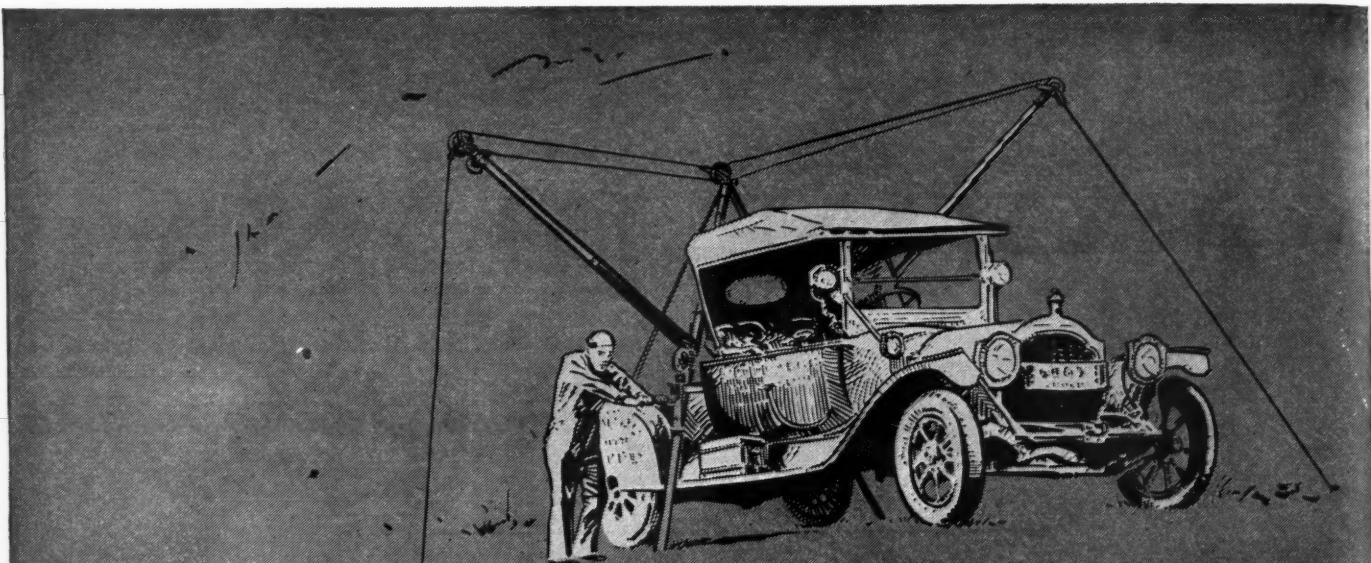


MOON MOTOR CAR COMPANY
ST. LOUIS, U. S. A.

STEWART McDONALD
PRESIDENT



MAKERS OF MOON SIXES AND DIANA EIGHTS



THE REAL PROFIT OF THE REPAIR BUSINESS COMES FROM WRECKED CARS

There is a lot of money in the garage business for the man who operates a Holmes Wrecker and goes after road service.

That is where the money is made—that is where the big profit making repair jobs come from. Are you getting yours?

You cannot get a wrecker equal to the HOLMES, nor can you get more for your money. It will pay for itself quickly with the tow fees alone.

The Holmes No. 250 is a powerful efficient double boom type wrecker at a moderate cost. It embodies twelve of the famous fifteen Holmes Exclusive features. While it is light of weight, its unique and sturdy construction permit a capacity of 4 tons and the many desirable features peculiar to the boom type wrecker make it far superior to any crane type and yet the cost is practically the same.

*See the Holmes No. 250 on your Jobbers Floor
or write him or this company for catalog and
full information.*

ERNEST HOLMES COMPANY
Chattanooga Tennessee

HOLMES AUTOMOBILE WRECKER

MOTOR AGE

Reg. U. S. Pat. Office

VOL. XLIX

NO. 15

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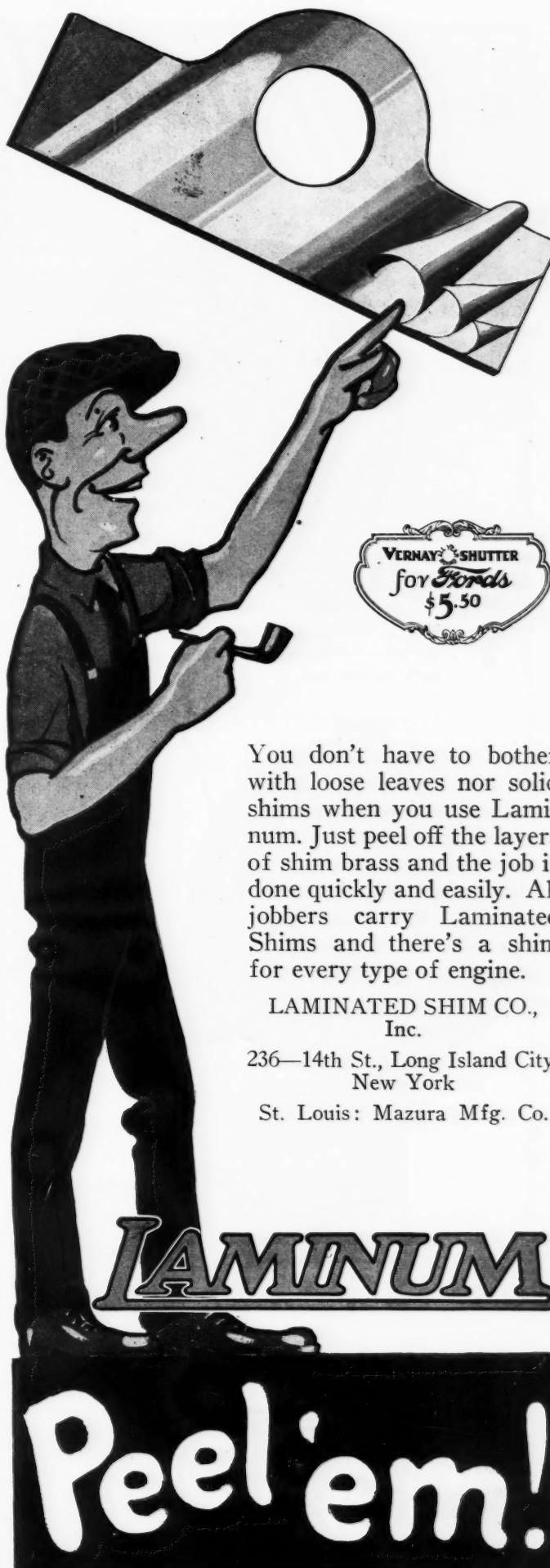
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Off in a jiffy with

STEVENS

Universal

WHEEL PULLER

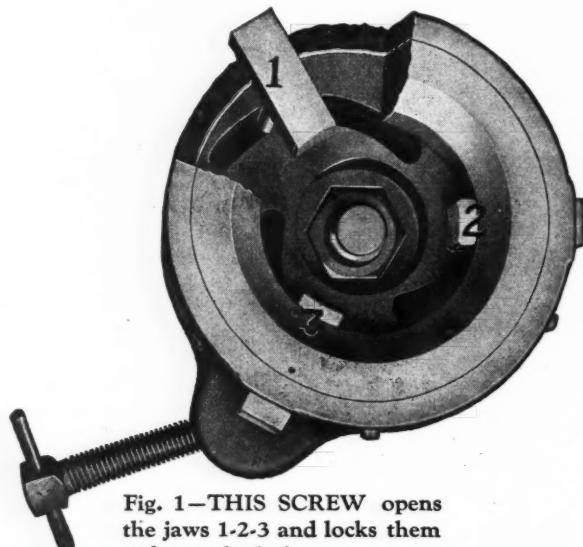


Fig. 1—THIS SCREW opens the jaws 1-2-3 and locks them tight on the hub.

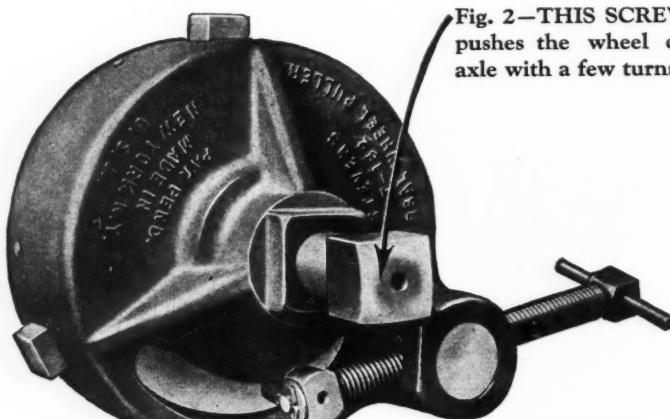
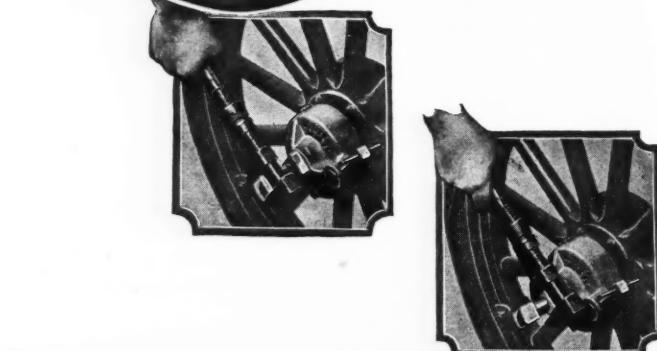


Fig. 2—THIS SCREW pushes the wheel off axle with a few turns.



As a HUB RE-THREADER you can't beat Stevens Puller because it's adjustable. Hence jaws must follow true thread!

Another tough problem solved with usual Stevens thoroughness! This powerful, rugged tool ends your wheel-pulling troubles for all time.

Adjustable jaws, 16 threads to the inch, fit all hubs except Ford and Chevrolet 490. Even damaged threads are held in a powerful grip, and the big screw (see Fig. 2) does the rest. No danger of stripping the threads or dishing the wheel.

Does the work of a whole army of pullers of different sizes. The only practical universal wheel puller. Entirely self-contained, no separate parts to get lost.

T-152—Stevens Universal Wheel Puller. Price \$20.

Write today for Shop Manual No. 8, just off the press, showing 1926 "Speed-Up" helps for the progressive shop.

Stevens & Company
375 Broadway
NEW YORK

1438 S. Mich. Blvd.
CHICAGO

"Thru your jobber—
his service is economy"

Largest
Line of
Special
Automotive
Tools

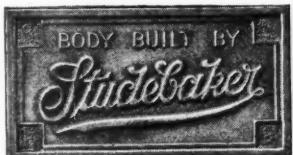
Stevens SPEED UP Tools



TRADE MARK REG. U. S. PAT. OFF.

5 reasons why the Studebaker franchise grows more valuable every day.

1. One Profit Value
2. Unit-Built Construction
3. Always Kept Up-to-Date
4. Used Car Pledge
5. Lowest Time-Payment Rates



This symbol means that Studebaker prices do not include the profits of outside body-makers

—and three reasons why Studebaker dealers are turning the used car *problem* into a used car *opportunity*.

1. The famous Used Car Pledge nationally advertised by Studebaker.
2. The lowest time-payment rates available, applied to used cars as well as new cars.
3. The scores of 100,000-mile Studebakers which prove Studebaker stamina and make all used Studebakers easy to sell.

Another reason why 1926 will be a big year under the Studebaker franchise.

The Studebaker Corporation of America
South Bend, Indiana

THIS IS A STUDEBAKER YEAR

Doubling retail sales without increasing your overhead

by
F. E. Moskovics
President

**STUTZ MOTOR CAR COMPANY
OF AMERICA, Inc.**
INDIANAPOLIS

LAST WINTER each Stutz dealer made his estimate of the number of NEW STUTZ (with Safety Chassis) cars he could sell in his territory.

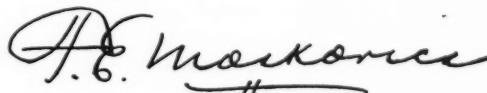
At that time these dealers knew the price of The NEW STUTZ, and they had seen the car and ridden in it. But the public had not yet been brought into the picture.

Within the past three months, due to the demand for The NEW STUTZ that has developed from the time the car was first publicly shown, the sales of each dealer have more than doubled his early estimate.

Doubled sales without increased overhead means added profit to the dealer--with a much higher percentage of net on each dollar of sales.

Real profits to dealers, in the form of "cash in the bank", has always been one of my pet aims in this business.

(Signed)



FROM THE STUDY
OF LIGHT COME
VICTOR LAMPS

THERE'S A VICTOR
LAMP FOR EVERY
AUTOMOTIVE NEED

VOL. 1. NO. 8.

EDITED BY VICTOR LIGHT

Victorgrams



"Clardy, you are certainly a wizard at selling spot lamps.

"I don't believe there's a car in your shop that hasn't got a spot lamp on it."

"Well, they all need one, don't they?" was Clardy's quick answer.

OOf course, there's a lot of car owners that don't know that. Some of them seem to think that a spot lamp is just a nice shiny affair to dress the car up.

"Once sell a man on a well lighted car though and he sees the real value of a spot lamp.

"Really, Black, that's all there is to my success as a merchandiser.

"I don't sell 'em lamps, as lamps. I sell light. Once you get that idea across to them and the lamps sell themselves.

"Our regular inspection of all the lights on a car before we let it out of the garage sells the owner on a well lighted car. He is driving one.

"If he hasn't got complete equipment it's a cinch to sell it to him because he knows the value of good lights on a dark road."

"What will I need for equipment for my shop, Jim?" queried Black.

"You won't need much other than equipment for adjusting lights, and a small stock of lamps, reflectors, bulbs, etc. Your next order will be a good one but a small stock will get you started.

"I'll tell you what to do. Just write the Cincinnati-Victor Company and they'll fix you up with all the dope you need, give you a price on a Light Adjusting Outfit (it isn't very costly) and all the data you need.

"No, you can get your stock of Victor lamps right from your jobber.

"But, just let me add this, Black. Do it, don't just think about it.

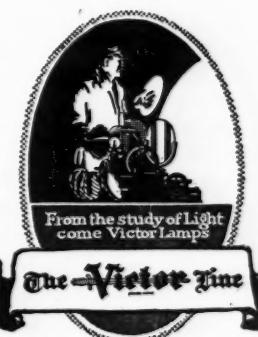
"You'll sell a lot of lamp equipment and the labor on installing it. And besides the profit on this, you'll get a lot of new business. These car owners are a clannish crowd. Treat one right and he'll bring his whole gang with him."

* * * *

If, like Black, you haven't started to sell light to your customers do as Clardy suggests, write us. We'll gladly give you the benefit of our long and varied experience in selling light.

Check coupon below and mail today.

THE CINCINNATI VICTOR COMPANY
712-720 Reading Road,
CINCINNATI, OHIO



THE CINCINNATI VICTOR CO.
716 Reading Road
CINCINNATI OHIO

Send me items checked without charge.

"MOTOR VEHICLE HEADLIGHTING"
 A 28-page hand book thoroughly covering this subject.

ILLUSTRATED Circular describing VICTOR complete Light Adjusting Station Equipment and quote me special price.

NAME.....

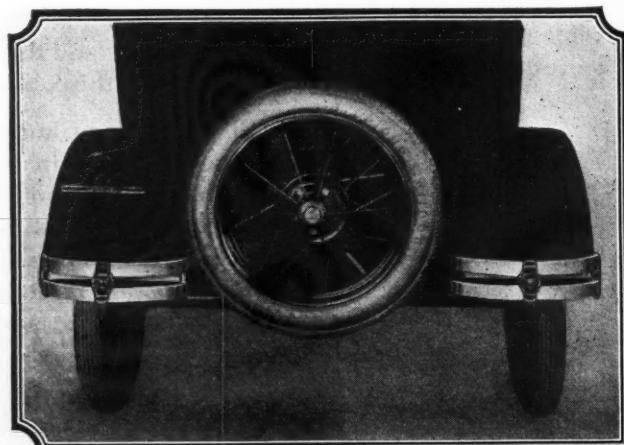
ADDRESS.....

CITY OR TOWN.....

STATE.....

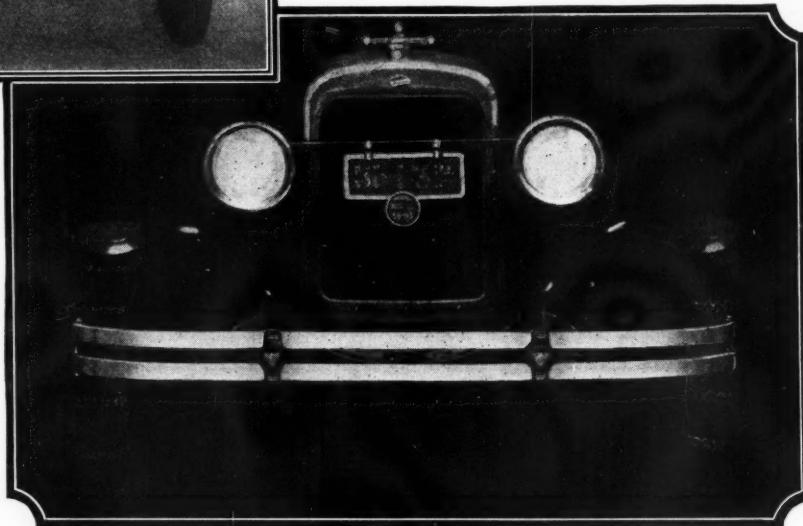
WEED BUMPERS

for light cars, too—



~~Ford fender-guard~~

Bumpers
and
Fender-
Guards



~~Overland bumper~~

Installed quickly and easily, without drilling or cutting—that's a big point in favor of WEED Bumpers and Fender-Guards. "Shimmying" and swaying are overcome by rigid attachments on the light-car WEEDS. Bumps and shocks don't loosen them.

Attached at right height to meet—not interlock others—WEED Bumpers and Fender-Guards are also correctly curved to prevent hooking in traffic.

You can recommend WEEDS for light cars with the same confidence of satisfaction as in recommending the WEED Bumpers and Fender-Guards for heavier cars. Display the WEED line.



A PRODUCT OF THE
AMERICAN
CHAIN COMPANY, Inc.
in business
for your safety

AMERICAN CHAIN COMPANY, Inc.

BRIDGEPORT, CONNECTICUT

IN CANADA: Dominion Chain Co., Limited, Niagara Falls, Ont.

DISTRICT SALES OFFICES:

Boston, Chicago, New York, Philadelphia, Pittsburgh, San Francisco

Sales Keep Up With Production Gains

*Optimistic Views for Rest of Year Prevail
Among Industrial Leaders, Both In
and Out of Automotive Field*

By LESLIE H. ALLEN

New York, April 9.
ARE sales to consumers keeping pace with production and what about general business conditions and outlook?

In the face of the March production of 447,185 passenger cars and trucks, second highest production month in the industry's history, these questions are being asked by the man who has both eyes on declining stock market prices as justifying, he thinks, a pessimistic attitude toward automotive business prospects for the rest of 1926.

Sufficient sales reports for the first quarter of 1926 are now available to make possible an interesting comparison.

During January, February and March this year 1,138,409 passenger cars and trucks were produced. This exceeds the 1925 first quarter by 42 per cent, the 1924 quarter by 14 per cent and the 1923 quarter by 39 per cent.

As compared with the 42 per cent production increase in the 1926 quarter over the 1925 quarter these sales increases for the same periods have already been reported or estimated:

Peerless nearly 300 per cent; Nash-Ajax more than 100 per cent; General Motors 61 per cent; Chrysler 31 per cent.

From March 1 to 28 Dodge Brothers reported a gain of 21 per cent in retail sales over the same period last year. For the last three weeks in March sales exceeded factory shipments, although shipments were 43 per cent higher than during the same weeks of 1925.

March Dodge Brothers sales in the Metropolitan district were 1,297, or 147 higher than March last year. Buick sales in this territory in March were 3,187, a new monthly high for the New York branch.

Some of the most prominent leaders in the automobile industry have recently been quoted as optimistic with reference to the business outlook. Confidence also marks interviews obtained from leaders in various lines.

Ford retail deliveries are reported as showing a sharp improvement during the last two weeks with consequent stepping up of production. Sales are said to have averaged 600 per day greater for the ten days ended March 20

One-Third of a Billion Dollars
Is the estimated retail volume of accessory business that will be done in 1926 by automotive merchants. A special compilation in the Sales and Service Reference Number of MOTOR AGE, May 6, 1926, will show the standard items needed to complete the equipment of new cars as they come from the factory

than for the preceding ten-day period and indications were that sales for the period ended March 31 would show a further gain.

Hudson shipped 31,500 cars in March against 17,500 in March, 1925, with retail deliveries 35,000 against 30,000, an increase of 80 per cent in shipments as compared with the same month last year.

Willys-Overland retail deliveries show an increase of 10,500 for the first quarter over that quarter last year.

F. H. Rengers, general sales manager for Moon and Diana, says that the sales department's allotment of 10,000 Diana cars for 1926 will be easily absorbed, with about 1,200 of the 10,000 for export. Diana shipments for the week ended March 27 were about 250 against orders for 425.

M. L. Pulcher, president of the Federal Motor Truck Co., reports that January and February showed a sales increase of 130 per cent over the 1925 period.

Walter P. Chrysler saw no evidence in the Chrysler business to justify continued uncertainty in the financial market this year. He said Chrysler retail deliveries for the week ended March 22 were 35 per cent ahead of the corresponding week in 1925 and that such deliveries in the last week in March exceeded by far the 1925 week in all the seventeen sales districts.

"We expect," he added, "public buying of our product this summer and fall will equal or exceed last year. Our March and April schedules have been increased to meet the demand. Factory inventory of finished cars on hand is less than one day's production. Our export business exceeds greatly this year the same period last year."

Charles M. Schwab saw "no reason why we should not confidently expect that the public buying for the coming summer and fall will compare favorably with the same period last year."

A reply from the United States Department of Commerce stated that there was no change which warranted an alteration of the views concerning the outlook which were expressed by Secretary Hoover on March 5.

Used Car Buyer

Plan of Drennen Motor Company Sold 1159 Second Hand Vehicles in 1925 at a Profit

By RUEL McDANIEL

IN 1925, not counting the week of Christmas, the Drennen Motor Co., Buick dealers, Birmingham, Alabama, sold 1159 used cars. To carry on such an extensive used car business the company has developed some excellent ideas, all consolidated into a system that is worth considering by other dealers.

The first point in this general plan is that the used car department is run as a separate business from the regular new car sales organization, in a separate building altogether. There is a special used car office, a manager of the department, salesmen who sell nothing but used cars.

One of the first things a prospective customer of the used car department sees when he drives into the building is a sign, reading: "E. L. Scouten, Used Car Buyer."

"The reason for calling me the used car buyer rather than merely the manager of the used car department is perhaps obvious," explained Mr. Scouten. "The sign ties up with the general idea which we try to convey to the public, and that is that we are 'buyers' of used cars, not

merely traders. We want to get it out of people's heads that they 'trade in' their old cars on new ones. We try to give the impression that we actually 'buy' their cars for what they are actually worth, then allow that amount to go as part payment on new cars purchased from the company. This helps to gradually get away from the idea prevalent with many people that they can get more than their car is worth by 'trading it in.' So this sign produces the psychological effect which we want conveyed. It helps a lot toward conveying our idea, too."

The used car department is expected to stand on its own legs in the matter of profit and loss. This means that some method of carefully checking the history of every car that passes through the place must be kept.

As soon as a car comes in for inspection, with a view to "selling" it to the company as part payment for a new car, it is appraised unbiasedly by Mr. Scouten, from radiator to tail-light, so that he may determine its actual value. He has a very complete form for making this appraisal.

Appraisal form used by Drennen Motor Co. in buying used car

Drennen Motor Car Company's CAR APPRAISAL		
Date _____		
Owner _____	Make _____	Year _____
Address _____	Type _____	Mileage _____
City _____	Eng. No. _____	Tag No. _____
Telephone No. _____	Frame No. _____	
APPEARANCE as a whole		
Paint	CHASSIS as a whole	
Body	Motor	
Fronts	Ignition	
Wheels	Starter	
Upholstery	Light and Horn	
Top and Boot	Battery (age)	
Side Curtains	Gas System	
Running Boards	Radiator	
	Front Axle	
	Steering	
	Clutch	
	Transmission	
	Universal	
	Rear Axle	
	Brakes	
	Spars	
	Spokes	
TIRES,		
Left Front	Right Front	
Left Rear	Right Rear	
Span	Tubes	
EQUIPMENT		
Chains	Crack	
Jack	Pump	
Tools	Side Curtains	
(a) Total Estimated Necessary Repairs _____		
(b) Average Sales and Overhead Cost _____		
(c) APPRAISED VALUE _____		
Must Sell for at Least (a + b - c) _____		
Allowance of _____ is O. K.		
This offer expires in 5 days		
Used Car Buyer		

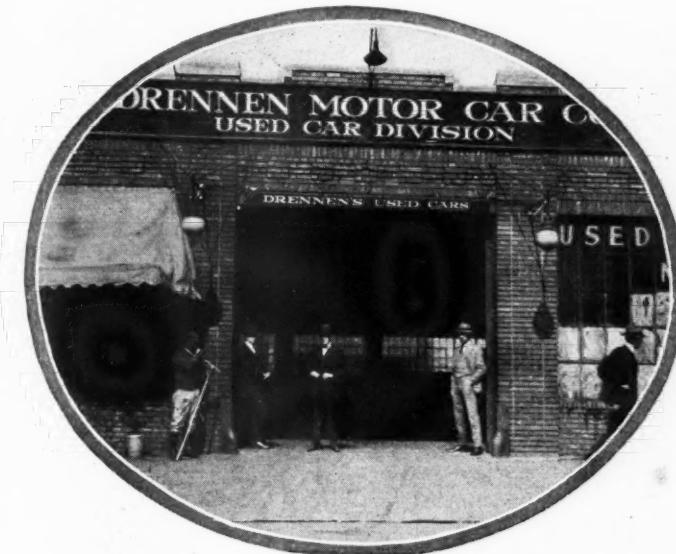
When a used car is bought by the Drennen company one of these forms provides its complete history

DRENNE MOTOR CAR CO. USED CAR RECORD		
DATE REC'D. _____	19_____	CODE NO. _____
MAKE OF CAR _____	YEAR MODEL _____	TYPE BODY _____
MOTOR NO. _____	SERIAL NO. _____	TITLE NO. _____
REC'D. FROM. _____	NAME _____	TRADED BY _____
ADDRESS _____	STREET NO. _____	CITY _____ STATE _____
MAKE FOLLOWING REPAIRS:		

COST RECORD		SALES RECORD
ALLOWANCE		BILLING PRICE
OVERHAULING		DEMONSTRATION EXP. (GAS AND OIL)
REPAINTING		SALES EXPENSE (COMMISSION)
TOTAL COST		PROFIT OR LOSS
SOLD TO _____		DATE _____
ADDRESS _____		STATE _____ PRICE _____
TERMS OF SALE		
CASH PAYMENT	_____	\$ _____
ALLOWANCE ON	_____	\$ _____
NOTES. PAYABLE \$ _____	PER MO. \$ _____	
TOTAL		\$ _____

Solves Trade-In Problem —

First there are the blanks for writing in the customer's name, address and telephone number; the make of the car, the type, engine and frame number, the mileage shown on speedometer or whatever the appraiser considers a fair mileage estimate. There is then a section of the sheet devoted to the appearance of the car as a whole, the condition of paint, body, fenders, wheels, upholstery, top, curtains and running boards. The chassis comes in for a complete description, including the condition of the



motor, ignition, lights and horn, battery, radiator, axles, front and rear, steering unit, transmission, universal, springs, brakes, starter. Tires are carefully examined and a detailed report made of them on this form. So is all the equipment, such as chains, jack, pump, crank and tools.

From this report of the car's condition Mr. Scouten determines the amount of repairs necessary to put the vehicle in good condition. This is added to the appraised value, the overhead cost and expense of selling and a selling price is arrived at. From this final selling price it is determined what the company can afford to pay for the car.

A copy of the appraisal is given to the car owner, with the understanding that the offer is good for five days only. The form is signed by Mr. Scouten.

When the car is brought back and sold to the company, it is given a code number at once. This number follows it through the shop and remains with the car until it finally is sold to a used car customer. The code is the identification key for all cars.

This is part of a "Used Car Record." The record consists of a white sheet, properly printed, and perforated so that it may be inserted in a loose-leaf file. As soon as the car is bought one of these forms is made out and takes its place in the file, in numerical order according to the code number.

This sheet gives the date of receipt of the car, its make, year and model, motor and serial number, type of body, name and address of person from whom it was received, the name of the new car salesman handling the deal.

Following this information there is a space for listing the repairs to be made on the car. On the back of the sheet, then, are listed the detailed costs of the repairs, as

PROSPECT RECORD CARD		
NAME	SALESMAN	
RES. ADDRESS	RES. PHONE	
BUS. ADDRESS	BUS. PHONE	
PROSPECT FOR	NOW OWNS	
DEMONSTRATION GIVEN	DATE SOLD	MODEL
REMARKS [USE OTHER SIDE IF NECESSARY]		
REPORT DATE		CALL AGAIN

Above: Form of used car prospect card which is made out in triplicate

Left: The used car department of Drennen Motor Co. is a separate division

soon as the shop cards come to the used car office for recording.

Another section of the sheet is devoted to the cost of the vehicle. There are spaces for entering the amount paid for it, the cost of overhauling and painting, and the total cost, including the allowance, or price paid.

The form provides for every step in the transaction, from the time it comes to the department until it finally is sold. Next comes a space for the sales record. It lists the selling price, that is, the actual figure at which the car is priced; the cost of demonstration, which means primarily the cost of gasoline and oil; the sales expense—salesman's commission—the final selling price and the profit or loss from the transaction.

Tools Included with Used Car

Near the bottom of the sheet are spaces for entering the name and address of the buyer, the date and the name of the salesman who sold the car. Still farther down is a space for entering the terms of the sale—the cash payment, allowance (if another car was taken as part payment) and the amount of the monthly payments.

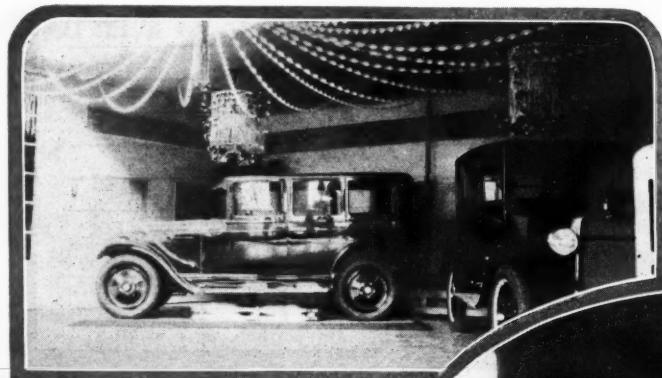
The company makes it a point to include a complete set of tools with every used car sold, even though no tools came with it. This is of course included in the selling price of the vehicle. However, even though it does increase the final price, Mr. Scouten declared that it paid to provide a proper set of tools, rather than depend upon the customer buying them extra. It means better service to the customer, and it means additional tool sales for the company. A list, showing the name of every tool included with the car, goes with it, and the buyer signs a duplicate slip, acknowledging receipt of the tools.

Salesmen use the same methods in selling used cars as are used in the new car department. They receive special instructions in the handling of new prospects, in addition to the general sales talks and instructions for the whole sales force. The used car men meet in the department every morning at eight o'clock for a mapping out of the day's work and for any special instructions which Mr. Scouten or the general sales manager may wish to convey.

In order that the men keep after prospects, and either sell them or take them off their lists, the company allows each used car man a limit of 35 prospects on his list.

(Continued on page 30)

Automotive Sales and Service



*Salesroom of Overland Sales
Co., St. Charles, Ill.*

*In the shop. Every hand tool
has a definite place on a big
wall board and it must be
there when not in use*

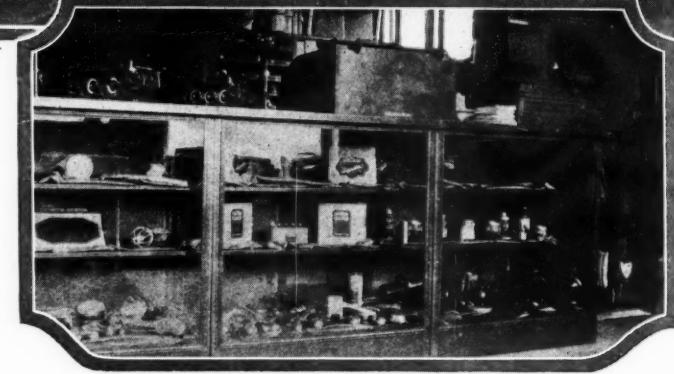
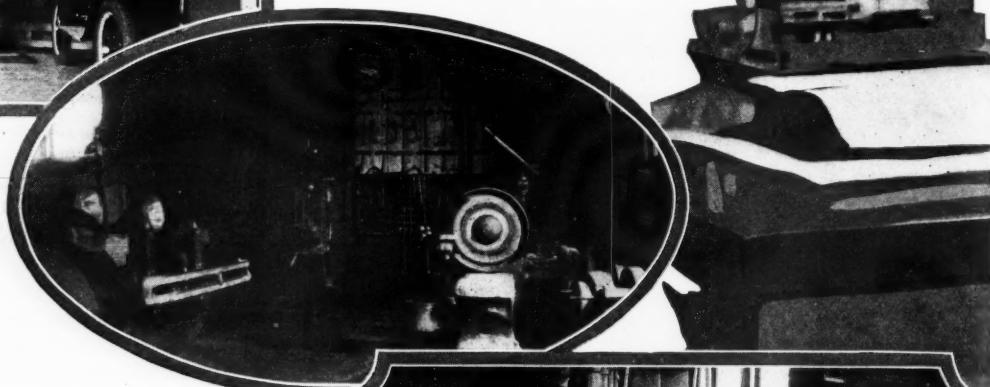
THE term "automotive merchant" properly describes Joseph R. Winzey of St. Charles, Ill. Mr. Winzey is proprietor of the Overland Sales Co., in that city of about 5,000 population. He has been in the automobile business for eight years and has had his ups and downs, but he has earnestly tried to learn a lesson from every setback as well as from every success and he feels now that he has established a business worth while, one that provides him with ample facilities for efficiently serving the public.

A short time ago Mr. Winzey asked Tom Wilder, architectural editor of MOTOR AGE, to suggest a layout for a building he was contemplating erecting. This indicated that he was looking to the future. Then he answered a questionnaire sent to him by the editor, giving further evidence of having planned his business with considerable care. With these things in mind the writer and Mr. Wilder recently spent a day with Mr. Winzey at his store to get from him what we could that would be worth passing on to other automotive dealers.

More Space Is Gained

Mr. Winzey did not erect the new building that he had in mind. Instead he built an addition to his old building and remodeled the salesroom and office section to give him a much more attractive and convenient layout. One thing that he gained from the remodeling was suitable space at one side of his salesroom for the steel and glass accessory showcases shown in one of the photographs. Immediately behind this showcase is the parts department, connecting directly with the repair shop.

Sales of new cars from Mr. Winzey's establishment will be about 125 Overlands and Willys-Knights this year, he estimates. But he does not intend to depend upon new car sales as his only source of profit. In addition to his new cars he has the following departments, each one of



Modern accessory display case, above, contains only standard merchandise that the dealer can stand behind

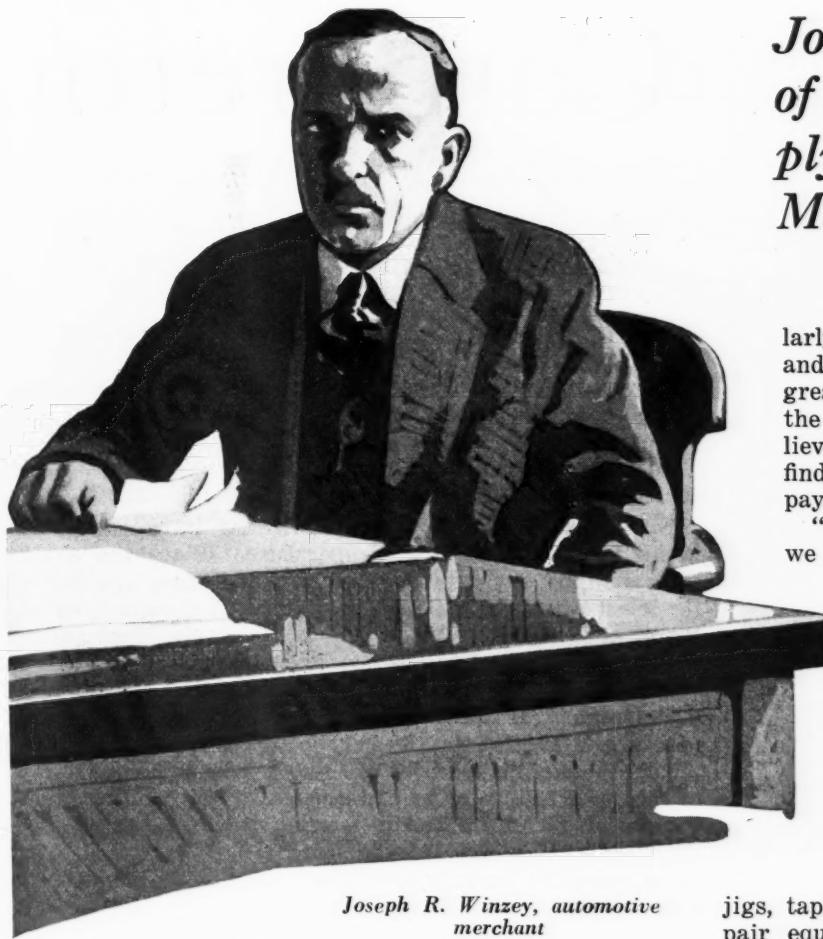
which is expected to return a profit and is accounted for separately:

Used cars, parts, labor, accessories, tires and tubes, gasoline, oil and grease, radio, battery, storage and general.

In his office Mr. Winzey employs a young woman, resident of the city, who is expected to keep the books for these various departments, and to be generally useful in meeting visitors and showing and selling accessories and radio equipment.

Let us take a look at Mr. Winzey's business by departments.

New Cars. In the new car department he does much of the selling himself. In fact until this year he did not employ salesmen except for part time. He now has one full time salesman, one part time salesman and a saleswoman who gives part of her time to the job. He is an enthusiastic believer in the cars he sells and he instills this enthusiasm into all his employees. Time spent in the shop preparing new cars for delivery or giving free service after delivery is strictly charged to the new car department.



Joseph R. Winzey, automotive merchant

But free service after delivery is not much of a problem with Mr. Winzey. He takes the greatest of care to have every car in perfect mechanical condition when it is delivered and then he has a distinct understanding with the customer as to what service will be given gratis thereafter. In the case of the Willys Knight and Overland Six models free service is limited to inspection and necessary adjustments once a month for three months, and in the case of the Overland Four to one inspection and necessary adjustments after the car has been driven 500 miles. He gives his customers to understand, in a tactful way, that with these exceptions all service will be charged for at regular rates.

Used Cars. The used car department is expected to stand on its own feet. Mr. Winzey is one of the new school of automobile dealers who are buying used cars for resale instead of just taking them in trade solely for the purpose of making a new car sale. Good used cars are fixed up and sold, but those that are run down past the point of profitable reconditioning are junked. It is Mr. Winzey's opinion that many used cars should be junked that are being sold "as is" at very low prices. Mr. Winzey finds new paint a great aid in selling used cars. In fact, with the addition of a new coat of paint he recently sold a used car for \$150 more than he had been asking for it before it was painted. He is considering the installation of a pyroxylin booth for refinishing his used cars.

Parts. A complete stock of parts is carried for Overland and Willys-Knight cars only. A card index perpetual inventory system is used and just as soon as the stock of any item runs low a note is made of it on the "want list" and it is replenished at the earliest opportunity. The parts stock is stored in modern steel bins which save space.

Labor. One mechanic and a helper are employed regu-

Joseph R. Winzey, in Town of 5,000 Finds It Pays to Supply all the Maintenance and Merchandise Needs of His Customers

larly. Mechanical repair work is limited to Overland and Willys-Knight cars. Flat rates are used to a great extent, but when work is done on the time basis the rate is \$1.25 an hour. Mr. Winzey is a firm believer in the flat rate system of maintenance, but he finds that about half of his customers insist upon paying for service by the hour.

"The flat rate system is the only method by which we can make a profit in our shop," he said, "and yet it saves money for the customers if they only realized it."

The use of efficient equipment is what makes the flat rate system profitable to the shop and economical for the customer, Mr. Winzey said. He is gradually adding the most up-to-date equipment, and now has the following major items:

Heavy duty press, motor service press, welding outfit, cutting outfit, gas generator, forge, radiator repair equipment, electric drills, electric grinder, set piston aligning jigs, taps and dies, complete set of reamers, battery repair equipment, complete set of hand tools and speed wrenches and special other equipment for servicing Overland and Willys-Knight cars.

There are a number of other items that he intends to add as the business warrants.

Accessories. The profit possibilities of accessories are fully appreciated. The new showcases shown in one of the photographs were recently installed. New cars are sold with as much equipment as the buyer will take. The stock of accessories is limited to standard, well advertised merchandise. "And I positively will not gyp the price," said Mr. Winzey.

Gasoline, Oil and Grease. The gasoline pumps are in front of the building. Care is taken to sell only gasoline and oil of uniformly good quality. A pit has recently been constructed in the garage for lubrication service. A sketch of it made by Mr. Wilder is shown. Drained oil is used in the oil burner that has been installed to heat the entire plant. This burner is considered by Mr. Winzey as an outstanding economy.

Nice Profit From Tires

Tires and Tubes. Tires and tubes are carried in stock in the most generally called for sizes. Steel racks are used to store the stock which takes up a comparatively small space in the parts room and yet yields a very nice profit. The shop is equipped with vulcanizers for repairing tubes.

Radio. This was the first season for the radio department, but Mr. Winzey says it has earned its right to stay in his store. His investment in stock this season never amounted to more than \$300, yet profits were sufficient to fully pay for a very complete demonstrating set that he has installed in his salesroom. He does not have any special employes for the radio department. Sales are made chiefly to automotive customers who become inter-

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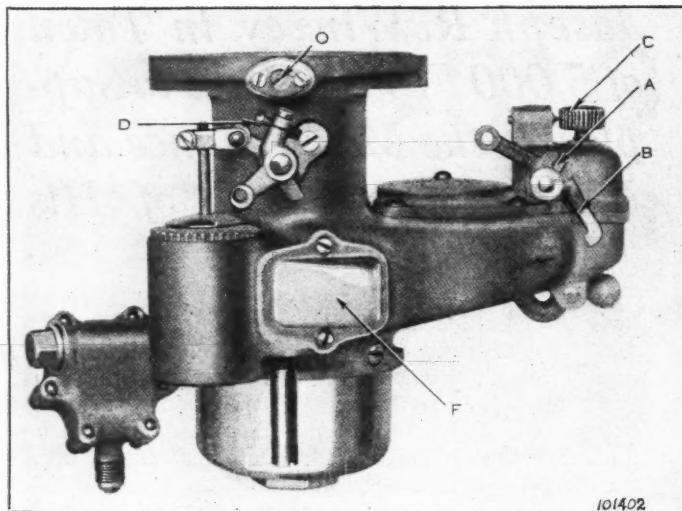


Fig. 1.—Cadillac carburetor, side view

ADJUSTMENT of the carburetor is an operation often undertaken but not so often done correctly. Many cases of unsatisfactory engine performance are traceable to a carburetor that has been worked on but not properly adjusted. It pays the service shop to know how to adjust carburetors and then to take care to see that the work is done exactly as it should be. In this article the adjustment of the carburetor on the V-63 and the Type 61 Cadillacs is fully described:

Adjustment of Enriching Device.—Adjustment of the enriching device can be made only when the engine is not running. When the lever "B" (Fig. 1) is held forward against the stop on the carburetor body, the tip of the air valve should, at a room temperature of 65 to 85 deg. F. have an opening of $1/16$ in. to $1/8$ in. when held up lightly. In making this test do not apply enough pressure to the valve in holding it up to spring the thermostatic member to which the rear end of the air valve spring is attached and against which the valve strikes when the lever is held forward.

If the opening under these conditions is more or less than the limits given, the readjustment may be made after removing the cover "P" (Fig. 2). **Caution:** Care must be used in removing the cap "P" (Fig. 2) over the auxiliary air valve not to ruin the air valve spring by stretching or twisting it. Remove the spring after lifting the cover just enough to permit this. If the spring is deformed by careless removal of the cover, do not attempt to repair it, but replace it by a new spring. Now loosen the two screws which hold the bracket carrying the thermostatic member. Tighten the screws after completing the adjustment.

Tongue Should Be in Center

The tongue "A" (Fig. 1) should stand in the center of the slot in the lever "B" when the carburetor enriching button on the instrument board is pushed forward as far as it goes. If the tongue does not stand in the center of the slot, a readjustment should be made by altering the length of the control rod attached to the lever "B."

Adjustment of Auxiliary Air Valve Spring.—Before attempting to adjust the auxiliary air valve spring, make certain that the enriching device is in correct adjustment, also make sure that the relief valve over the air valve seats properly.

The rear end of the auxiliary air valve spring is attached to a thermostatic member which automatically adjusts the spring to compensate for changes in tem-

Carburetor

Detailed Instructions Given for Operations That Should Be Done Skillfully to Assure Satisfactory Performance

perature. Auxiliary air valve spring readjustment is, therefore, very rarely required when once made.

The adjustment of the auxiliary air valve spring is made by the adjusting screw "C" (Fig. 1) and in the same manner as on earlier eight cylinder carburetors. To determine when the spring requires readjustment, and to make the readjustment, proceed as follows:

Start the engine and run it until the intake manifold is up to normal driving temperature. Place the spark lever in the fully retarded position and move the throttle lever to the "CLOSE" position. The engine speed should then be about 300 r.p.m. If the engine runs faster than this loosen clamp screw and unscrew the throttle stop screw "D" (Fig. 1) until the engine speed is reduced to 300 r.p.m. If unscrewing the stop screw "D" does not permit the throttle in the carburetor to close enough to reduce the engine speed to 300 r.p.m. loosen the set screw in the small collar on the end of control rod running from the steering gear to the bell crank lever at the side of the starter housing. If the engine runs less than 300 r.p.m. move the throttle lever down until the engine speed is increased to about 300 r.p.m.

A Test to Make

Then make the following test to determine the necessity for adjusting the auxiliary air valve spring:

Press down gently on the ball shaped counterweight of the auxiliary air valve and note whether the immediate result is an increase or decrease in engine speed. Re-

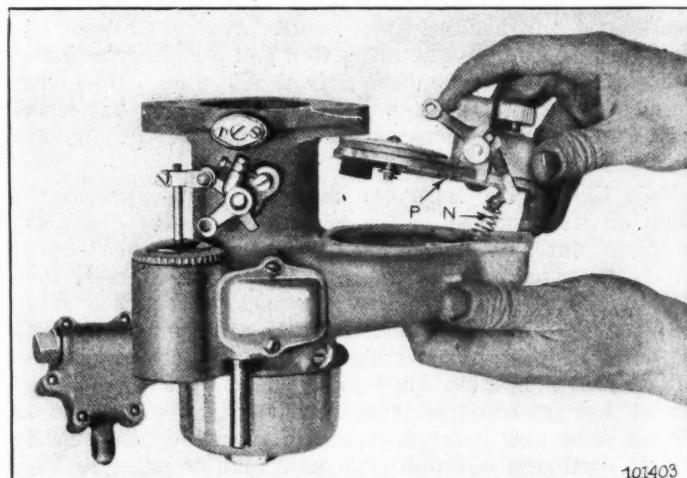
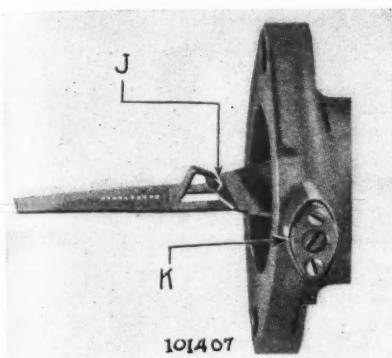


Fig. 2.—Removing auxiliary air valve spring from Cadillac carburetor

lease the counterweight and allow the engine to run a few seconds to regain its normal speed. Then press up gently on the counterweight and note the effect on the engine speed.

If the mixture is correct, the immediate result of gentle pressure up or down on the counterweight of the auxiliary air valve is a slight decrease in engine speed.

Adjustments on V-63 and Type 61 Cadillacs



Left: Fig. 6.—
Cadillac carburetor, testing
spring of automatic
throttle

If the immediate result of gently upward pressure on the counterweight is a slight decrease in engine speed while the result of downward pressure is an increase in engine speed, a rich mixture is indicated. If the immediate result of downward pressure is a decrease in engine speed while the result of upward pressure is an increase of engine speed a lean mixture is indicated.

Remedy for Incorrect Mixture

If the above tests indicate an incorrect mixture, adjust the auxiliary air valve screw "C" (Fig. 1), turning it clockwise to correct the lean mixture and counter-clockwise to correct rich mixture. Continue to change the adjustment of the screw "C" and to test as above until a correct mixture is indicated. Do not turn the screw "C" more than a few notches at a time and not more than two notches at a time when nearing correct adjustment.

Move the throttle lever to the "CLOSE" position unless it is already in that position. The engine should now run at a speed of about 300 r.p.m. If it does not, change the adjustment of the throttle stop screw "D" until this speed is obtained. When the stop screw "D" has been adjusted correctly, lock the adjustment and adjust the collar on the control rod from the steering gear so that the throttle in the carburetor will start to open immediately the throttle lever is moved. Test the correctness of the mixture as before, and if necessary readjust the screw "C." When the test indicates a correct mixture with the throttle lever at the "CLOSE" position and the engine running 300 r.p.m. adjustment of the auxiliary air valve spring is correct. The enriching device should then be readjusted.

Throttle Pump Control Thermostat.—On V-63 and type 61 cars, the piston of the throttle pump does not enter the gasoline as in earlier eight cylinder carburetors, but when operated forces compressed air into the carburetor bowl above the gasoline, momentarily forcing additional gasoline through the spray nozzle. Since good acceleration is obtained with a somewhat leaner mixture after the carburetor has become warm, a throttle pump control thermostat "G" (Fig. 3) and "E" (Fig. 4) covered by the cap "F" (Fig. 1) is provided to open the relief hole when the temperature of the carburetor reaches a predetermined point, thus providing a release for a portion of the air compressed by the pump. The result is that a lesser amount of gasoline is forced through the spraying nozzle.

Vent Control Thermostat.—Carburetors on V-63 and later type 61 cars are fitted with two thermostats "G" and

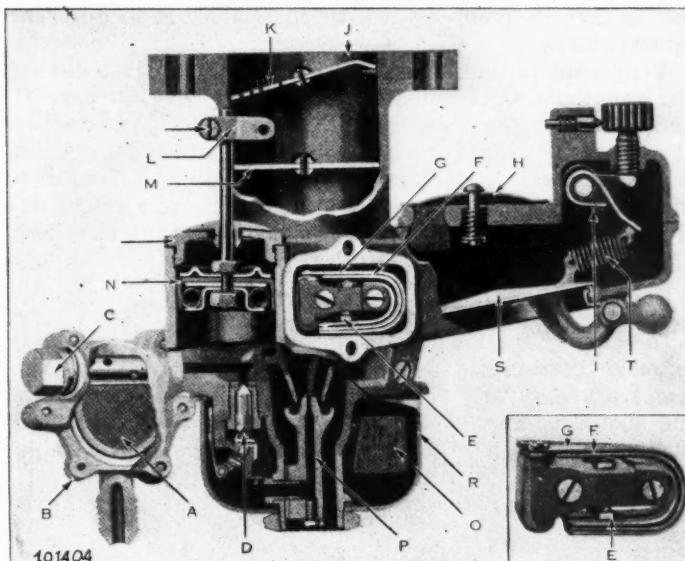


Fig. 3.—Cadillac carburetor, double thermostat type,
sectional view

"F" (Fig. 3) attached to the thermostat block instead of one.

The object of the second or high temperature thermostat is to open a large vent from the carburetor bowl during hot weather, this being desirable when very high test gasoline is used. On V-63 and later type 61 cars the vent control or high temperature thermostat is the outer one. On some of the first carburetors fitted with a vent control thermostat, it is the inner one. On these carburetors the vent control thermostat covers a smaller vent than on later carburetors.

Both thermostats are properly adjusted when the carburetor is assembled at the factory and require no further attention unless tampered with. If tampered with, thermostats may be readjusted in the following manner:

Adjustment of Throttle Pump Control Thermostat.—Throttle pump control thermostats on all V-63 and type 61 carburetors are adjusted in the same manner and to the same temperatures. To make this adjustment proceed as follows:

Removal of Thermostat

Remove the thermostat with block from the carburetor body, being careful not to injure the gasket. This may be done after removing the left hand screw in the face of the thermostat block. (On early type 61 carburetors with only one thermostat, both of the screws, "H" and "I" (Fig. 4) must be removed to remove the block.) The thermostat adjustment is made by turning screw "E" (Fig. 3) or "J" (Fig. 4) which should be so adjusted that the release vent hole is just closed at a temperature of 75 deg. F. and just open at a temperature of 77 deg. F. To test this, provide two dishes of water, one at a temperature of 75 deg. F. and the other at a temperature of 77 deg. F. First immerse the thermostat with

block in the water at 75 deg. When removed, the vent hole should just be closed. If it is not, readjust the screw "E" (Fig. 3) or "J" (Fig. 4) controlling the thermostat. Then immerse it in the water at 77 deg. The vent hole should then be just open. If it is not, readjust the screw. When the vent hole is just closed at a temperature of 75 deg. and just open at a temperature of 77 deg., the adjustment is correct and should be locked by tightening the lock nut.

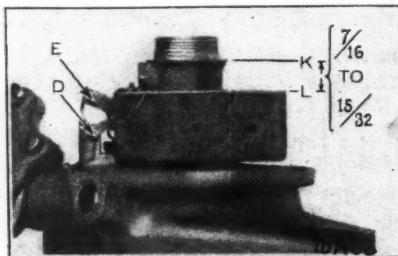
Adjustment of Vent Control Thermostat.—Vent control thermostats should be adjusted in exactly the same manner as throttle pump control thermostats, but to different temperatures.

Vent control thermostats should be so adjusted that the vent hole is closed at a temperature of 130 deg. F. and open at a temperature of 135 deg. F. (This applies also to carburetors on which the vent control thermostat is the inner one). If very high test gasoline is used during extremely hot summer weather, it may be found desirable to change this setting to have the vent closed at 115 deg. F. and open at 120 deg. F.

Water Must Be Right Temperature

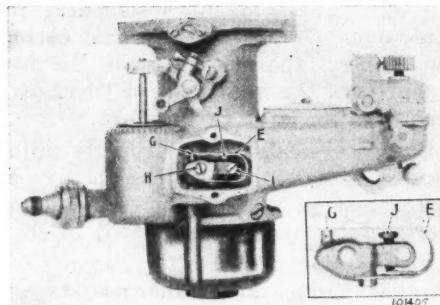
In making these adjustments, care must be exercised to make certain that the water used is exactly at the temperature given. This work must be done carefully and should be entrusted only to a careful workman. The efficient operation of a carburetor depends considerably upon the skill used in making these adjustments.

If the gasket between the block and the carburetor is



Left: Fig. 5.—
Checking Cadillac
carburetor float
setting

Right: Fig. 4.—
Cadillac carburetor, single thermostat type, used
on early 61 models



damaged in removal, replace it by a new one. There should be no possible chance for a leak around the vent passage.

Adjustment of Float.—Adjustment of the float is correctly made when the carburetor is assembled at the factory and should not require readjustment unless tampered with. The adjustment should be made as follows:

After removing the carburetor, remove the carburetor bowl, invert the carburetor and remove the small cork gasket against which the carburetor bowl presses. Take a measurement from the flange "K" (Fig. 5) to the top edge of the float "L" at a point diametrically opposite the needle valve. This measurement should be from 7/16 in. to 15/32 in. Correction of the float level may be made by springing the hinge bracket slightly.

Adjustment of Automatic Throttle.—The adjustment

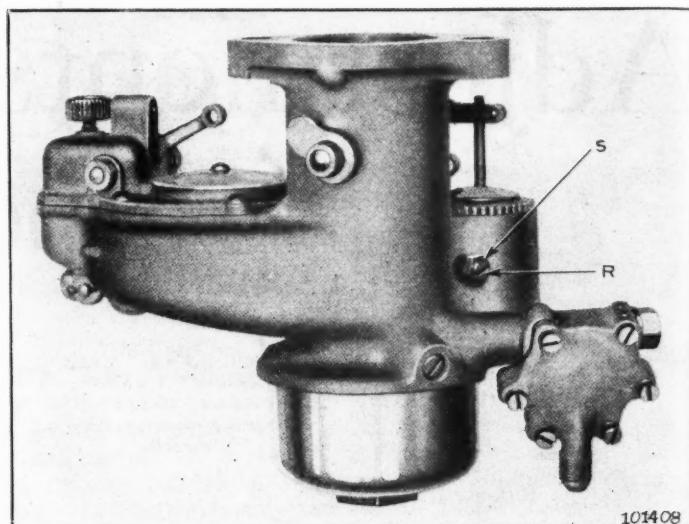


Fig. 7.—Cadillac carburetor showing throttle pump
adjusting screw

of the automatic throttle is made in the same manner as with the earliest type of 8 cylinder carburetor. To determine if the spring which controls the automatic throttle is in proper adjustment and to make the adjustment, proceed as follows:

Remove the carburetor from the intake manifold. Cadillac tool No. 76037 should be used in making this adjustment.

Attach the tool "J" (Fig. 6) to the automatic throttle and hold the carburetor in a horizontal position as shown, note the position which the throttle disc assumes. The disc should assume the horizontal position, the weight of the tool opening the automatic throttle to within 1/32 in. of the stop pin. If it does not and you are sure that the throttle shaft is free in its bearings, slightly loosen the screws on the plate "K" (Fig. 6) and turn the large adjusting cap. Turning the cap in a clockwise direction increases the tension of the spring and turning it in a counter-clockwise direction decreases the tension. Retighten the screws holding the plate "K" after making the adjustment.

Throttle Pump Adjusting Screw.—This adjustment is provided to make it possible to lessen the effect of the throttle pump which may sometimes be found desirable during warm weather, also during cold weather if high test gasoline is used.

Seven Turns Do Work

Unscrewing the adjusting screw "R" (Fig. 7) opens a by-pass in the passage between the throttle pump and the throttle pump control thermostat. At all temperatures with carburetors having the throttle pump control thermostat only and at ordinary temperatures with carburetors having the vent control thermostat the pressure of the air above the gasoline in the carburetor bowl is thus lessened at the moment of acceleration and less gasoline is forced through the spray nozzle as a result. On carburetors with the vent control, pressure is relieved at high temperature by the operation of the high temperature thermostat.

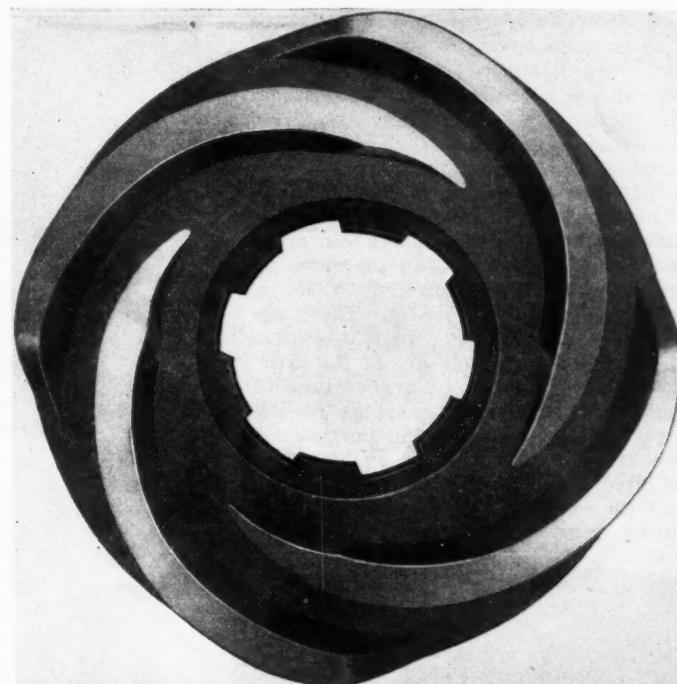
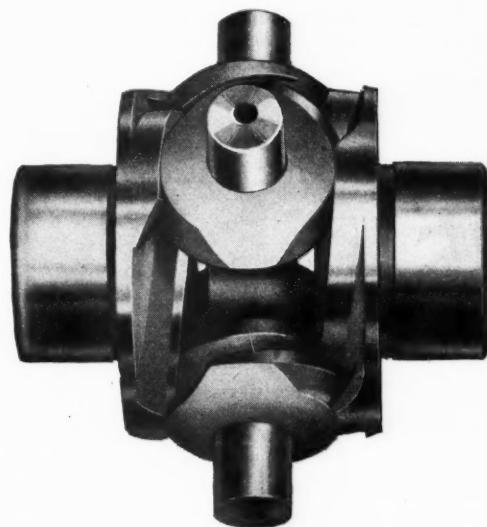
Seven turns of the adjusting screw "R" in the counter-clockwise direction fully opens the by-pass. The amount of opening required depends upon the quality of the gasoline and atmospheric temperature. Ordinarily it is necessary to unscrew the adjustment not more than two or three turns if adjustment is required.

After making the adjustment, lock it with the lock nut "S."

No Slipping Wheels With Scurlock Differential

SINCE the introduction of the motor vehicle innumerable attempts have been made to change the design and make up of the conventional differential and while some of these devices helped to a considerable extent they were either more costly to manufacture or were far more complicated than the otherwise simple type of differential gear mechanism.

As is generally known, of course, the first function of the differential is to make the two rear wheels independent of each other when the car makes a turn, or when road peculiarities demand that one wheel travel faster than the other. This the ordinary type of differential accomplishes very well. However, this type of differential, using the ordinary type of bevel gear, is of no avail when one of the wheels loses traction. Then, instead of delivering the power to the wheel which has traction—the wheel which could easily pull the car through, if kept turning—the old style differential takes the lines of least resistance and



Above: Side gear as used in the Scurlock positive drive differential, showing the peculiar teeth which are cut eccentrically, conically and helically

Left: Scurlock differential, a positive drive mechanism in which engine power is delivered to each rear wheel in proportion to the tractive resistance

two side gears and the spider gears, but does not include such parts as the differential housing, spider, etc. The reason for this is that the new differential gears can be used in present housings without any change in these parts.

Production Advantage

The gears from a production standpoint have the advantage that they can be made as cheaply as bevel gears, but to do this it was necessary for Manning, Maxwell & Moore to build special machinery for cutting the peculiar shape of the teeth used in the Scurlock gears. The real classification of the gears used in this differential has not been as yet determined since gears of this type heretofore have never been cut. At present this type of gear tooth is referred to as "eccentric conical helical." In action these gears can be likened to an irreversible steering gear, in which the wheel can readily turn the worm, but the worm cannot turn the wheel without great difficulty.

From the above it will therefore be readily understood why the car does not lose traction when one of the wheels gets on a slippery spot, deep sand or mud. There is also the advantage of positive double braking. Even though only one brake band may be tight on the car equipped with the Scurlock positive drive differential, both rear wheels will come to a uniform stop. When the car is turning a curve the wheel on the outer side is permitted to turn faster than the one on the inner side, thus preventing slipping of the tires on the ground.

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delivers the power where the pull does no good, that is, to the wheel which is easiest to turn and which has lost its traction.

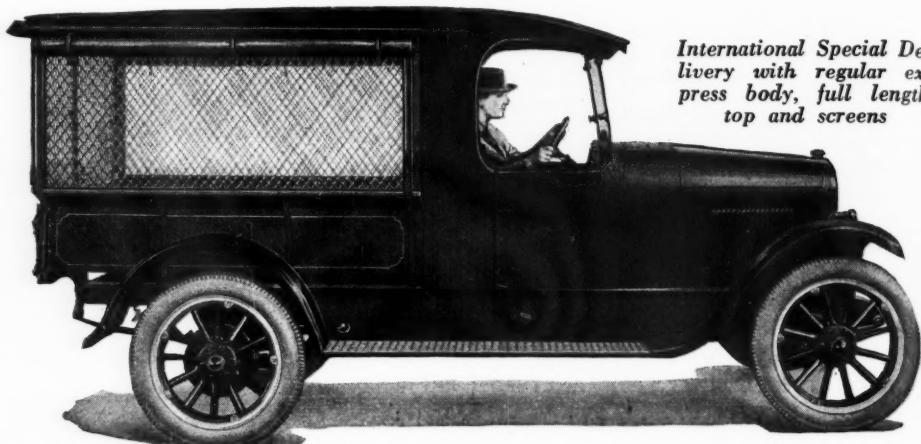
With this in mind it is interesting to note the recent development made by Lewis H. Scurlock, pioneer in the field of differential design and builder of the M. & S. differential, used extensively during the time of the war and which was adopted at that time by the Jeffery-Quad, built by Nash. The new differential design by Mr. Scurlock is so constructed that the engine delivers its power to each rear wheel in proportion to the tractive resistance of the road, without regard for road conditions. Thus, if one rear wheel were jacked up the power of the engine would drive the car off the jack because the wheel on the ground would get the drive.

The Scurlock differential is being placed on the market by the Scurlock Differential Corp., 332 S. Michigan Ave., Chicago, but is manufactured by Manning, Maxwell & Moore, Fitchburg, Mass. Basically speaking the differential as sold by the Scurlock Corporation includes only

International Special Delivery Added to Line

A NEW light delivery truck of less than one ton capacity recently was announced by the International Harvester Company of America. The new model is called the International Special Delivery, has a wheelbase of 116 in. and has been added to the line to fill a demand for a light, sturdy unit smaller than the present model S one-ton truck.

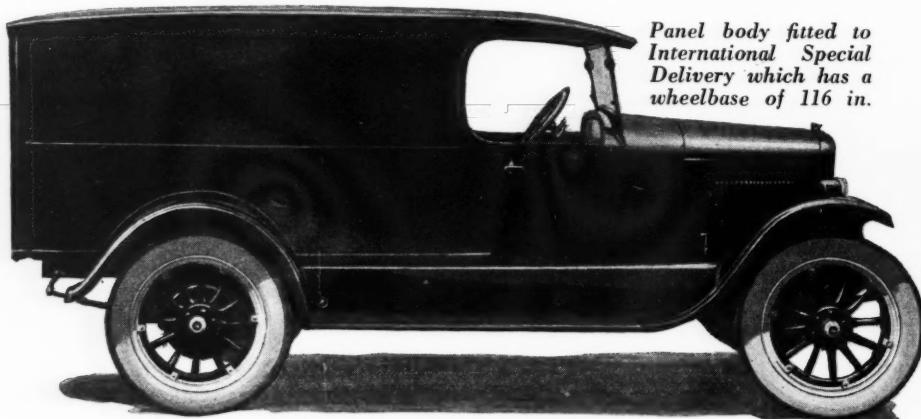
The frame has a depth of 4½ in. and is made of 3/16-in. stock. It has four cross members and is carried on the axles by semi-elliptic front springs, 2 by 40 in. and rear springs 2 by 53 in. There are auxiliary rear springs, quarter-elliptic, 1½ by 21½ in. Wheels are of the artillery type with taper roller bearings in front and plain roller bearings of the Bower type in the rear. Pneumatic cord tires 31 by 4 front and 32 by 4½ rear, are fitted. The front axle is an I beam while the rear is a single reduction semi-floating type with spiral bevel gears.



International Special Delivery with regular express body, full length top and screens

engine is a single disc dry plate clutch and a three-speed gearset. The gear reduction, engine to rear wheels, is 4:45 to 1 on high.

Panel body fitted to International Special Delivery which has a wheelbase of 116 in.



Steering is of the conventional worm and gear type.

The engine, a four-cylinder, has a Ricardo type head and a 3-point mounting in the frame. The bore is 3½ in. and the stroke is 4½ in. Connecting rod bearings are 2 by 1½ in. while the three main bearings, front, center and rear, are 2 by 1¾ in., 2 by 2½ in. and 2 by 2½ in. respectively. In unit with the

Lubrication is by pressure feed to all main, camshaft and connecting rod bearings. Other parts of the chassis are

lubricated through Alemite fittings. Battery ignition is used and cooling is accomplished by the thermo-syphon system.

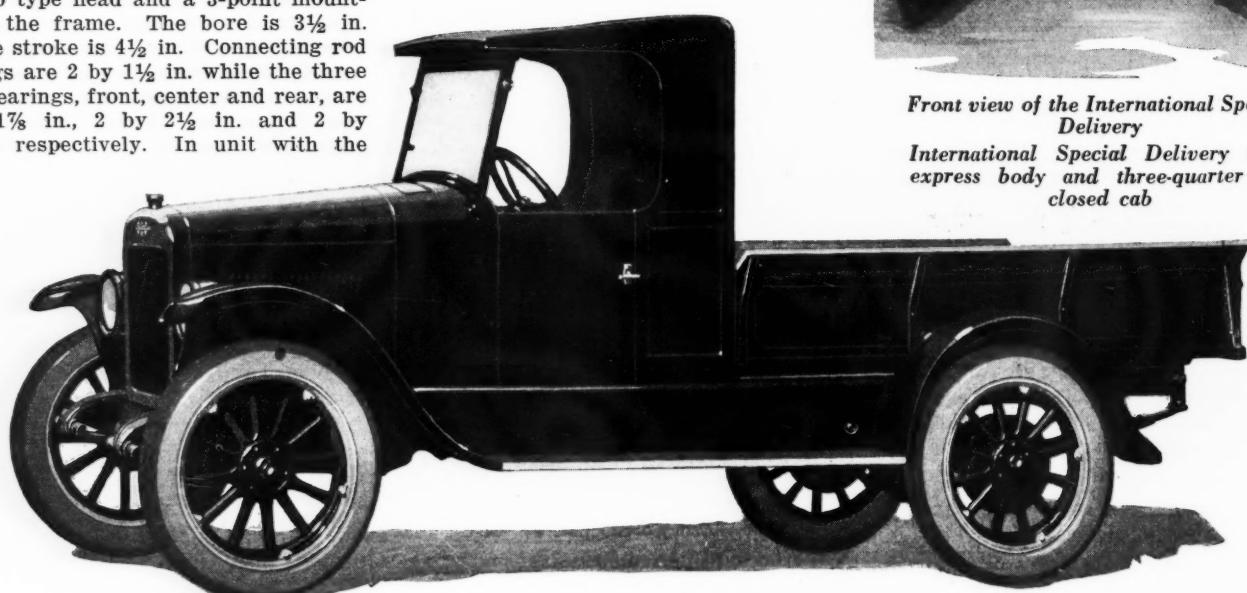
The control consists of left hand drive, spark and throttle levers on steering post, foot accelerator, gearshift and emergency brake levers centrally placed.

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Front view of the International Special Delivery

International Special Delivery with express body and three-quarter enclosed cab



Gallivan Racing Heads for Ford and Chevrolet Engines

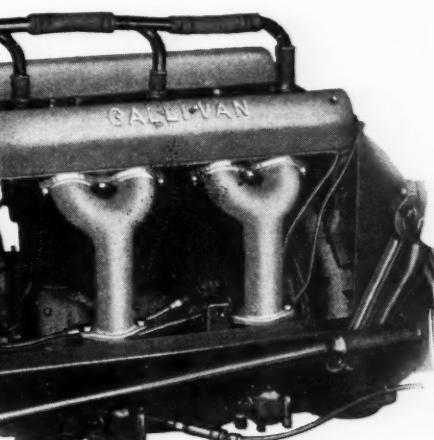
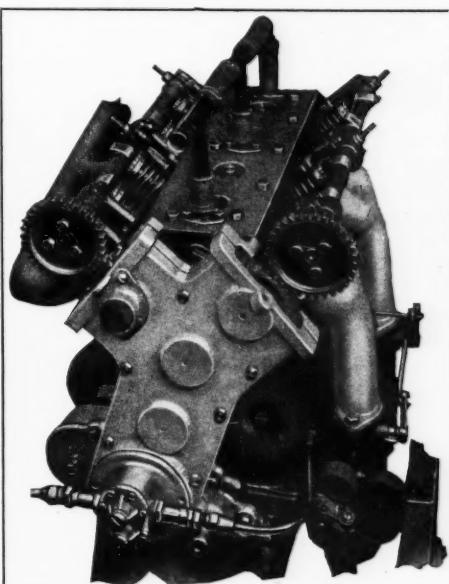
*Accessibility and Ease of Installation
Among Chief Features—Increased
Power Output*

An eight-valve cylinder head with two overhead camshafts and possessing other interesting features, especially from a racing standpoint, has been developed for the Ford and Chevrolet engine by J. E. Gallivan, Rantoul, Ill.

The combustion chambers are spherical in shape with a valve set at an angle. Using a large angle between the valves enables the use of a design whereby the valve seats are entirely surrounded by water. This allows a large exhaust valve to be used without danger from overheating. The valves in this head are two inches in diameter and the cams operate directly on the ends of the valve stems. Each valve is equipped with two valve springs of alloy steel.

The two camshafts are drilled hollow and the bearings are lubricated by oil under pressure. In each cam is drilled a small oil hole to lubricate the tappets, the extra oil flowing through the front end drive to the crankcase. The camshafts are driven by a train of spur gears mounted on ball bearings and enclosed in an aluminum housing. The gears are of the stub tooth type and made of special alloy steel.

There are four intake and four export ports, $1\frac{1}{8}$ in. in diameter. This permits use of one, two or four carburetors. Manifolds are furnished for either $1\frac{1}{2}$ or $1\frac{3}{4}$ in. carburetors. Provisions have been



*Above: Exterior view of the Gallivan eight-valve racing head for Ford engines. This shows the two cam-shaft housings and front end drive
Left: Gallivan eight-valve racing head for Ford Engine with camshaft housings removed*

made for driving the oil pump off the lower shaft in the camshaft drive and provision is also made for installing a supercharger if desired.

Accessibility is one of the features of the Gallivan racing head for Fords and it is said that the head can be removed and replaced on the block ready to run in less than 30 minutes. The price is \$600.

The overhead camshaft for the Chevrolet engine is enclosed in an individual housing which bolts to the cylinder head. The camshaft is driven by a silent chain and an automatic take-up is used to keep the chain at the proper tension. Each cylinder has two spark plugs which are installed in steel sleeve pressed into the head. The water and oil pump are both gear driven and mounted on the front case.

New International Trucks

(Continued from page 18)

The equipment includes front fenders, full length running boards, starter, electric lights, storage battery, speedometer, electric horn and tools. Special equipment supplied at additional cost includes an enclosed panel body, open express body with three-quarter enclosed cab, express body with full length top, side and rear screens and three-quarter enclosed cab, rear fenders and spare rim.

The price of the truck varies from \$765 to \$895 depending on the type of body. All bodies are built by the International Company in its plant at Springfield, Ohio.

A Bolt That Controls Lubrication

WHEN oil is poured into the ordinary oil cup or bearing, there is nothing to retard the flow, hence it passes out through the ends of the bearings. And yet, if that flow of oil could be controlled and only as much as was necessary for proper lubrication, were allowed to pass onto the bearing surface, it would mean

an almost ideal solution of the lubricating problem.

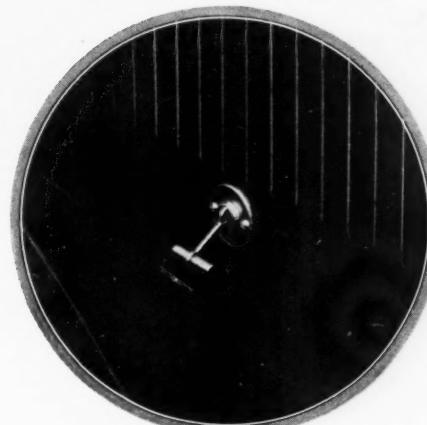
The Fostoria Screw Co., Fostoria, Ohio, has developed a special type of bolt for shackles, king pins, tie rod yokes, etc., which functions individually and automatically in the control of its own lubrication. In this lubrication device, which is inserted in each bolt, there is a ball-and-socket valve situated between the oil-cup reservoir and the bearing. When an oil cup is filled while the car is standing still, the snug seating of the ball-and-socket valve prevents any flow of the oil through the oil channel to the bearing surface. But as soon as the car



Bolt built by the Fostoria Screw Co., showing the ball and socket valve between oil cup reservoir and bearing

starts to move, the vibration incident to travel over roads and streets, keeps the ball moving so as to permit enough oil to pass through to maintain an oil film.

Below: New type of hood fastener, called the Wiley, in the locked position. To unfasten the hood two fingers of one hand grasp the horizontal bar shown on the latch and lift. This handle also raises the hood



Packard Aircraft Engine Combines Power with Light Weight

COMPARED with the famous wartime Liberty engine, the present Packard No. 1500 aircraft engine, for which the Government recently placed a \$3,737,000 contract, weighs 150 lbs. less and delivers 200 h. p. more.

The outstanding feature of the Packard engines apart from the low power-weight ratio is the compact design. Reduction in the overall length of the engine was the result of extensive research and the tests showed that with proper lubrication the length dimension of the bearings could be cut in half. This allowed the cylinders to be placed closer together with the resultant compactness. Unusual design of the cylinder construction and the comparatively short stroke has lessened considerably the overall height, thus reducing the head resistance of the engine and enabling the plane manufacturer greater freedom in his design.

Speeds up to 2,600 r.p.m. on the No. 1500 engines are possible through new principles in crankcase strengthening, the taking of explosion loads of the crankshaft through steel bolts instead of the aluminum case.

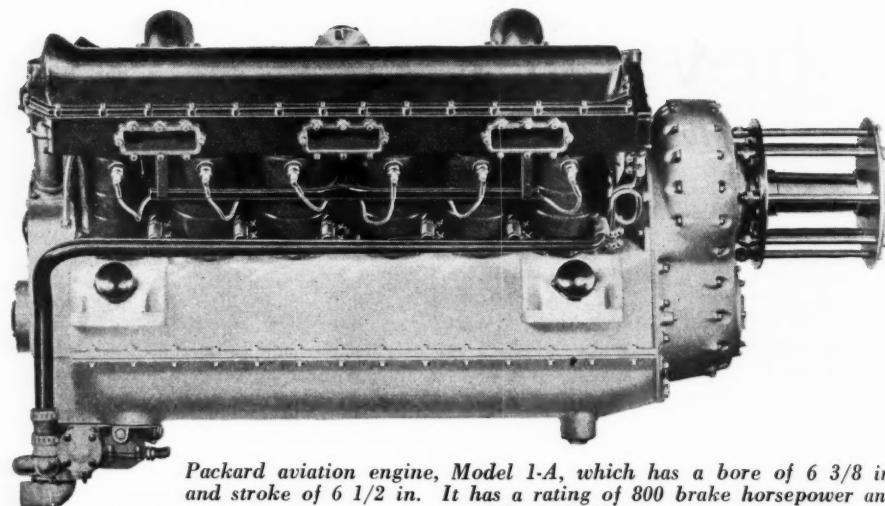
The six individual cylinders of all steel construction are formed into a block by an aluminum casting to which the upper end of the cylinders is attached. This casting in addition serves four other purposes namely, distributes the mixture to the cylinders; forms the exhaust passages; acts as a water header; and supports the camshaft bearing pedestals and valve stem guides. Four valves, two inlet and two exhaust, are provided per cylinder with the short valve ports formed integral.

Seven Camshaft Bearings

A single camshaft provided with 12 integral cams is supported in seven cast duraluminum bearings which are formed in pedestals and bolted to the top of each valve housing.

A departure from conventional construction is the valve spring arrangement. Instead of the customary spring arrangement, a series of small diameter piano wire springs are arranged around the valve stem guide in planetary fashion. Each of the springs is located over a tubular guide welded to a fixed lower washer and at the upper end they engage in an annular groove formed in the spring washer.

By means of long steel bolts anchored at the cylinder hold-down flanges and extending through the crankcase and bearings cups, the explosion loads on the bearings are taken through steel throughout. This arrangement supersedes the previous arrangement of securing the bearing caps to the crankcase through short vertical steel studs screwing in the upper half of the bearing support.



Packard aviation engine, Model 1-A, which has a bore of 6 3/8 in. and stroke of 6 1/2 in. It has a rating of 800 brake horsepower and weighs 1,300 lbs.

All accessories and the timing gear drives are grouped at the rear of the engine and driven through gearing and shafts from a bevel gear mounted on an extension of the crankshaft. Considerable ingenuity has been exercised in laying out the drives and with recent modi-

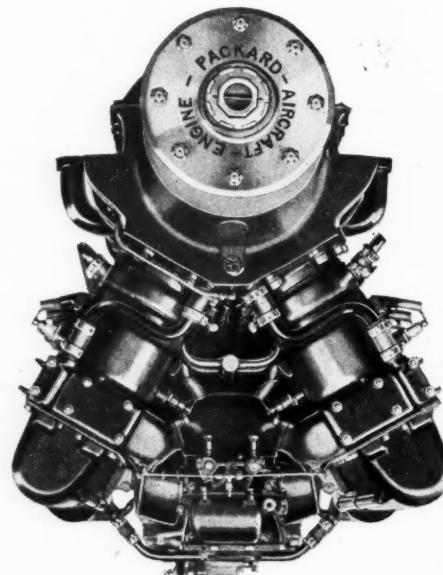
fications for greater accessibility, the camshaft center drive shaft can be removed without dismantling the engine while each of the other units can be detached without disturbing the adjacent drives. The grouping of the accessories has been worked out to accomplish two major objects namely to provide maximum accessibility for field service work and to effect weight saving.

Geared Drives

All fuel and oil lines leading from the engine are terminated on the crankcase by a fitting which secures the end of the lines positively to the structure of the engine. The object of this is to provide a definite place where the plane manufacturer is to connect up the pipes leading from the engine. In the past it has been customary to leave the ends of the lines free but now it is necessary for the plane manufacturer to provide the connection and make these where the engine builders have left the outlets held rigidly to the engine.

The engine is provided with geared drives of the spur gear single reduction type and entirely self contained. Between the crankshaft and the pinion a shock absorbing device is employed which relieves the gears of strain through impact overload. The gear carrying the propeller shaft is supported fore and aft on roller bearings with the thrust of the propeller taken by a ball thrust bearing just in front of the gear. The pinion is also carried on two roller bearings. On the direct drive models, propeller thrust is taken by a flange on the crankshaft just ahead of the first main bearing and bearing against a ball thrust bearing.

As the cylinder barrels project inside of the crankcase for a considerable distance chiefly to permit of compact construction and give greater rigidity, it also allows the No. 1500 engine to function satisfactorily in the inverted position by keeping excess oil from running into the inverted cylinders.



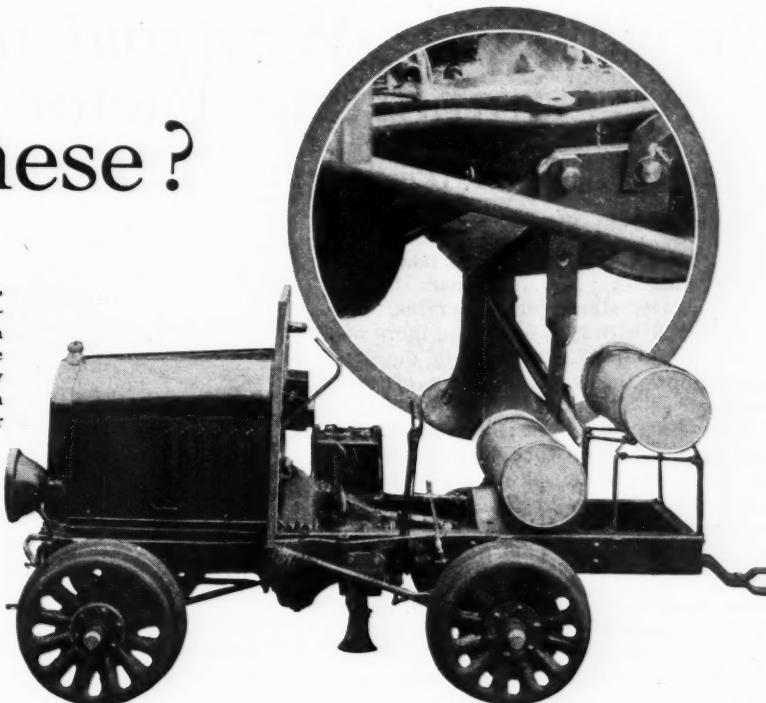
Propeller end of inverted aircraft engine, one of the types of aviation engines made by Packard company

fications for greater accessibility, the camshaft center drive shaft can be removed without dismantling the engine while each of the other units can be detached without disturbing the adjacent drives. The grouping of the accessories has been worked out to accomplish two major objects namely to provide maximum accessibility for field service work and to effect weight saving.

A development in the ignition system

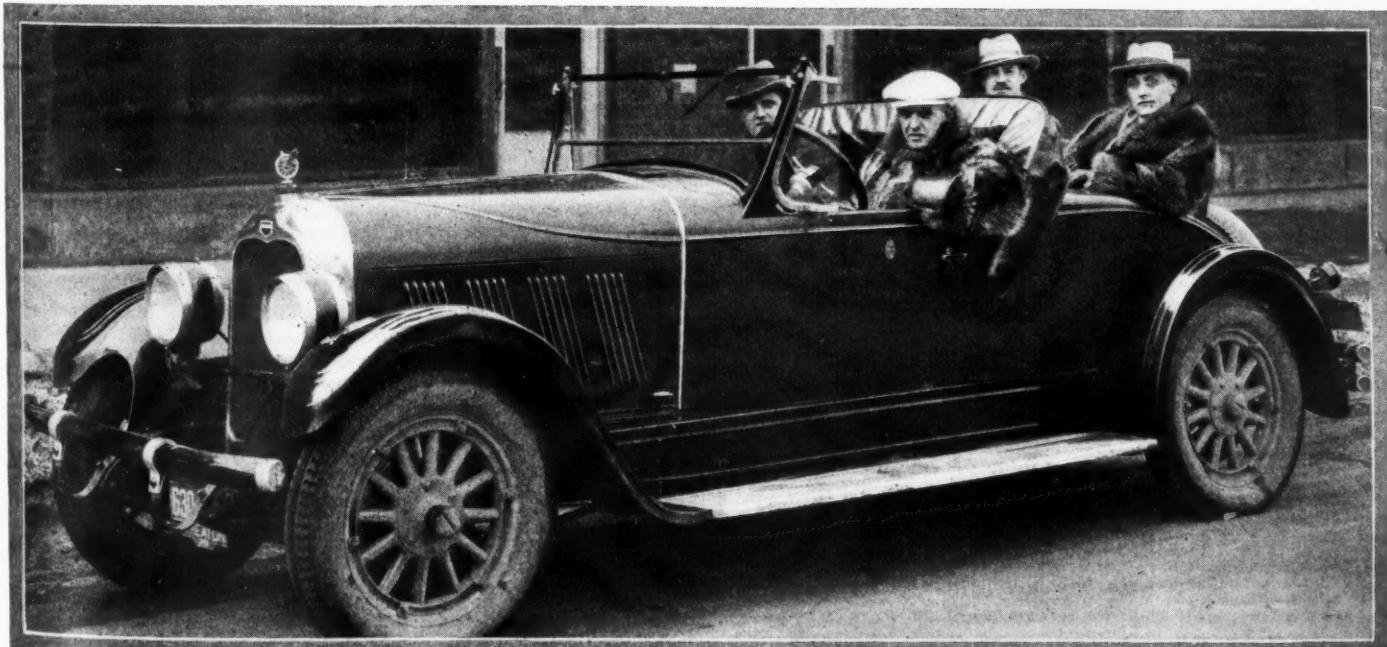
Can You Use One of These?

The unique rail car shown at the right, built by William L. Hughson of San Francisco, has a special water tank which supplies water to cool the flanges because of heat generated on account of the many short curves in the track. By means of a screw jack underneath the body, the car can be turned completely around



THE COSSACK UP-TO-DATE. Left: Raymond Keen, a Universal Film star, is using his Studebaker Special Six in making a Russian picture in which he plays the part of a Cossack. Thus another instance of where the automobile has taken over a function which at one time was essentially equine

SPEED PALS. "Red" Grange, the scintillating football idol from Wheaton, Ill., has taken unto himself an Auburn 8-88 roadster and also has bought from his earnings on the professional gridiron a similar car for his father. "Red" is shown at the wheel of his newly acquired possession



Knowing the Why and the How in the Shop Important Factor in Flat Rate

Edited By B. M. Ikert

Knowing Your Stuff Big Sales Help

WITH the great strides made during the last few years by flat rate, standardized service, call-it-what-you-will, it is becoming more and more essential that the men in the shop must know the how and why of their work.

Take electrical work, for example. A great share of the work that comes into the service station is of an electrical nature because that is the first thing that stumps the average customer. And the customer is not the only one it stumps.

The mechanic who tells a customer to come back the next day for a price on the job "after looking it over" does not stand so well with the customer as the mechanic who tests the generator, and who says the car will be ready tomorrow morning at 9 o'clock and the price will be \$4.50.

Electrical jobs are of a different nature than those taking in a rear axle or steering gear. The mechanic very often cannot see what's wrong in case of electric trouble, but if he knows what it's all about he can soon find out, by means of proper equipment and if he can think from an electrical standpoint.

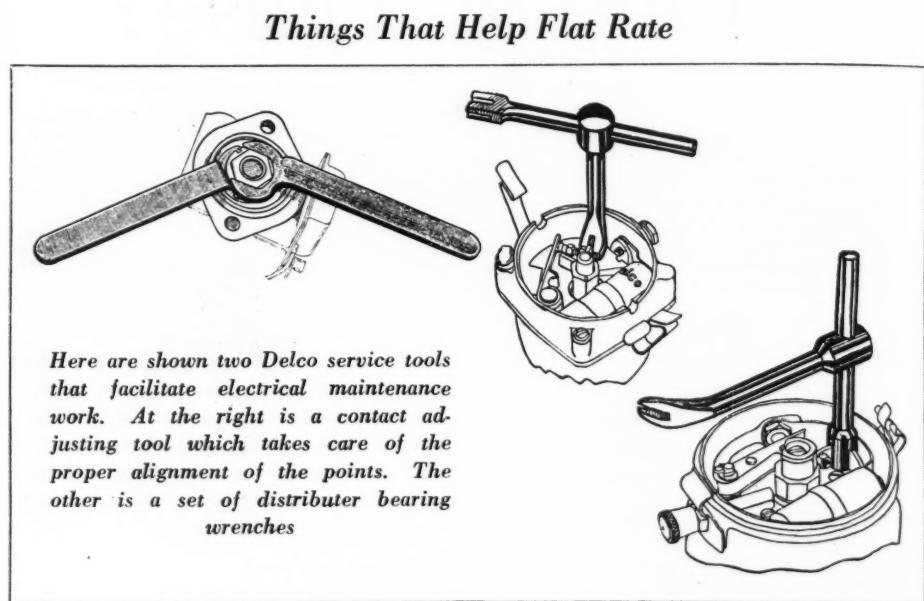
Wheel and Fender Operations on Haynes

Craig, Nebr.

To the Editor of MOTOR AGE:

What would be the labor and material cost on a 1922 Haynes for fitting one new front fender, one front wheel and straightening the front axle. I would like to know the price of both a disc and wood wheel.—George A. Swanson.

So far as we know there never have



Here are shown two Delco service tools that facilitate electrical maintenance work. At the right is a contact adjusting tool which takes care of the proper alignment of the points. The other is a set of distributor bearing wrenches

been any flat rates compiled for the Haynes car, but it is possible from other flat rates to get some figures which ought to come very close to the labor and material cost of the work you mention. We believe these prices will sum up about as follows:

Remove and replace front axle center	\$6.00
Straighten axle (after above operation)	4.00
Remove and replace front wheel	1.00
Remove and replace fender	4.50
Cost labor	\$15.50
Approximate cost of wood wheel	25.00
Approximate cost of disk wheel	30.00
Approximate cost of front fender	15.00

Crankshaft Grinding

Crankshaft grinding is a delicate operation and calls for highly skilled mechanics and proper equipment. It is precision work and should be entrusted only to shops that have made a specialty of this class of work. Under the flat rate plan of selling maintenance customers can be quoted a flat price for a crankshaft regrinding job should this be necessary, because usually the shops making a specialty of this work have flat rate prices the same as shops regrinding cylinders. For example, here are some typical prices for crankshaft regrinding as given out by one shop.

	2 in.	Under	2 in.	Over
4 connecting rods and 2 main bearings		\$12.00	\$15.00	
4 connecting rods and 5 main bearings		14.25	17.00	
6 connecting rods and 7 main bearings		18.00	21.75	
4 connecting rods bearings only		9.50	11.00	
1 main bearing only		5.50	7.00	
Ford, entire shaft				7.50

Progressive Work Advantageous

There is a concern making a specialty of lubricating, washing, battery work, tire service, etc., using to advantage a progressive system in turning out a car. By this system one man cleans only the chassis, another cleans the body and a third man dries the surface carefully and with an air line cleans the inside of the car and if the job of polishing is to be done the car is moved to another part of the finishing floor and followed through by still another crew. Within 15 min. from the time a customer drives his car on the wash rack, it is ready to be driven away.

FLAT RATES for Ford Rear Axle Operations

Motor Age's Flat Rate Forum No. 60

Manufacturers'
Official
Designation

Charge
Overhaul rear axle and rebush springs and perches when necessary... \$9.00
Repair or replace drive shaft tube..... 7.50
Repair or replace one radius rod..... 2.25
Replace rear spring tie bolt..... 3.50
Install new lead in rear spring..... 4.00
Replace spring perches, one \$1.50; both..... 2.50
Pad rear spring to line up body or replace rear spring tie bolt only..... 4.00
Rebush spring and perches..... 4.00
Install universal joint..... 5.00
Tighten rear radius rod..... 1.00
Install felt and steel washers—one side \$1.00; both sides..... 2.00
Install brake shoes and equalize emergency brakes—one shoe \$1.00; both..... 2.00
Tighten universal cap bolts..... .75
Install or tighten rear spring clips..... 1.25
Tighten rear hub lock nut—one side 50c; both sides..... 1.00
Fit new hub keys—one side 75c; both sides..... 1.50
Replace pull rod supports—one support 75c; both supports..... 1.50
Replace or rebush hub brake cum—each side..... 3.00
Replace rear axle assembly..... 4.50
Adjust pull rods or replace one..... .75

To be continued next week

The READERS' CLEARING HOUSE

Questions And Answers



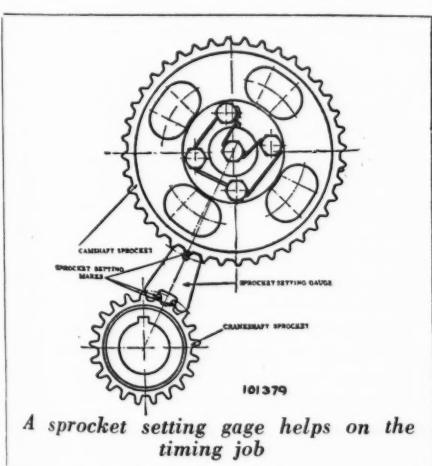
On Dealers' Problems

Timing on a Light Six Studebaker

Q.—We have a light six Studebaker, year 1921, which came in here with a cam-shaft sprocket and timing chain off. There are four studs holding sprocket, but they have turned the shaft so that it is out of time. How can we time same to put it back where it belongs. Owner tells us that he has taken off two links of the chain at different times. Would that make any difference in the timing, as the chain must be stretched some. Owner also says that the engine overheats. He has cleaned the cooling system but that did not help any.—William J. Beaudoin, Freda, Mich.

We are first going to give you the regulation instructions for setting the timing and then give some suggestions in regard to checking up to see whether the sprocket is bolted on properly or not. To set crankshaft and camshaft sprockets, first crank the motor until 1 and 6 cylinders are on upper dead center by getting the mark "Up-D-C 1-6" on flywheel opposite the pointer on rear of starter bendix drive housing. With crankshaft left in this position turn cam-shaft sprocket until "setting gage" will slide between the sprockets, with the one tooth on camshaft sprocket marked "O" and two teeth on camshaft sprocket marked "O" included between knobs on gage as shown in illustration.

Gage will hold sprockets in place while chain is assembled. Make sure that chain is assembled so that arrow, showing direction of travel, is on the front side and also that gage is removed before attempting to crank motor. The



setting gage can be obtained from a Studebaker branch or dealer.

If you do not have a setting gage we believe it would be possible to use a straight edge, lining it up between the centers of the crankshaft and camshaft to see that you have the sprockets in the right position when the chain is in

stalled. After you have the timing set approximately right, that is, assuming that the four bolts have not been used to put the sprocket on wrong, then you can check as follows: Turn the engine over by hand until No. 1 piston comes up on what should be the compression stroke. About at the top of this stroke or when the piston has just barely started down again the exhaust valve should close. When you get the piston in this position, if you find that the exhaust valve is not ready to close, then it means the sprocket has been improperly attached to the camshaft and it will be necessary to take out the four bolts and turn it one way or the other. After you have it bolted on properly it would be well to again check according to the instructions first given.

If two links have been taken out of the chain it would indicate that it is badly worn and in danger of breaking so that we would recommend the installation of a new one.

Coasting Puts Pressure On Other Side of Teeth

Q.—We have a 1922 Dodge Brothers car in the shop which has just had a new ring gear and pinion installed. It has a slight noise when coasting. Would like to have you tell what the cause is and what the remedy may be.—A. J. LaForge, R. 2 Box 7, Camarillo, Calif.

On page 25 of the March 4, 1926, issue of MOTOR AGE there was shown a sectional view of the 1921 Dodge Bros. rear axle and we would suggest your referring to this page. When you are causing the engine to drive the car one side of each pinion tooth and a certain side of the differential ring gear teeth come into action. When the car is coasting, however, the axle is driving the engine and while the direction of rotation of the gears is the same you will find that the other side of the teeth come into action. Accordingly it may be necessary to vary the adjustment of pinion or ring gear somewhat to overcome this noise. You will also find that when driving the differential pinion tends to lift while when coasting the action of the ring gear is to push it down.

Accordingly a little looseness in the differential bearings would permit the pinion to rise and fall and in one position it might operate quietly while in the other position it might make a noise. Accordingly it would be well to check up on the pinion bearing before working on the adjustment. Ring gear and pinion may be adjusted by jacking up the rear axle and then trying the operation after each adjustment. A slight application of the brakes can be made to see if the axle is noisy or quiet.

Foreman, Bring the Knock Detector

Q.—We are working on a 1925 Chevrolet engine that has been driven 8,000 miles. This engine has developed a sharp knock when the spark is advanced, but stops when spark is retarded. We have installed new pistons, pins, rings and tightened all bearings, also aligned connecting rods. This does not remedy the trouble.—Henry L. Lenz, Boscobel, Wis.

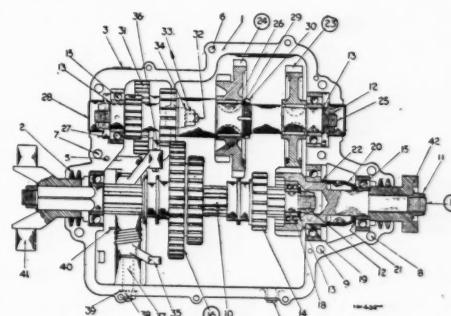
You do not say whether or not you checked up the piston clearance when you installed the new pistons. Possibly the initial wear on the cylinder walls increased the clearance two or three thousandths or possibly more. With the present day fuel there is considerable tendency for piston slap to occur when a slight amount of carbon accumulates or when the clearance increases somewhat. The clearance should be from .003 in. to .004 in.

To test for piston slap you can put a spoonful of 600-W in each cylinder. This should be a tablespoonful. This will temporarily cushion the piston against the cylinder wall and eliminate the noise if it is due to piston slap. Another possibility is that the spark plug points have burnt away until they are quite sharp and they may become hot enough to cause pre-ignition. A lean mixture will also tend to cause a knock on account of the heat it develops in the combustion chamber.

SPLIT THE APPLE IN TWO AND LIFT OUT THE CORE

Q.—Give illustration of White two-ton transmission and describe adjustments and method of overhauling.—A. Leonard, 621 E. 6th St., Duluth, Minn.

We are showing the illustration in accordance with your request. The method



Transmission on White 2-ton trucks

of overhauling is to split the case at the middle and then the various assemblies may be lifted out. If there is unusual end play in any of the shafts it can be removed by means of spacing washers. There are no adjustments that operate from the outside.

Planning Your New Building

Change In Proportion Sometimes Advantage

Q.—I am interested in building a new garage on a corner lot. The lot is 82½ ft. by 110 ft. I want room for 6 or 8 cars in storage and would like to have this partitioned from the rest of the garage and a work room for nine cars. This would have to be big enough so I could change tires and do small jobs beside work on the two cars. I want the building to face the main road that runs north and south. I want a ladies' rest room, private office and probably a stock room and room for oil. I do not want a showroom for cars. I want a filling station in front of the garage next to the main road. I intend to build of cement block. I would like to have the drive way for the garage to come off the main road. The drive way for the storage would come off the side street.—Forest DeCamp, Woodbury, Mich.

A Little Departure Here

We have departed a little from your instructions in laying out this building, making it the full width of your lot, 82½ ft., instead of 70 ft. as you show on your diagram. Cutting the width down 12½ ft. would crowd the departments considerably and would make a much less practical working plan. Besides this you have the future to consider and some day if you wish to build on the back part of your lot a much more systematic addition can be made using the full width than with 70 ft. By continuing the partition between the shop and the garage to the rear of the lot you will have a 32 ft. width shop and a 50 ft. width garage, both of which dimensions are very good.

With this addition in mind we have carried the trusses supporting the roof so that they extend parallel with the street instead of running them fore and aft as would naturally be done on a 50 ft. wide building.

The shop has space for five cars in repair, which is somewhat larger than you requested, but since you wish to do tire service, this extra space will not be out of the way for that purpose. We would not advise an entrance on the main road, because the only place to in-

VALVE CLEARANCE ON WHITE TRUCK

Q.—What is the right valve clearance of model G. R. 3½ ton truck?

.013 inches cold.

Q.—What is the correct valve timing on a ¾ ton White truck model G. A.? Manual Texeira, Paia Maui, Hawaii.

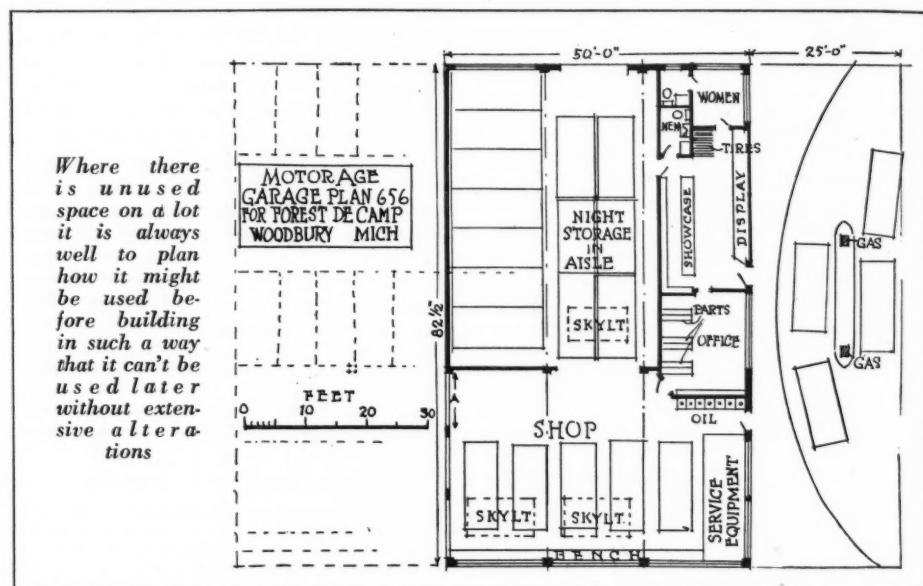
As this truck is a very old model we wonder if you do not mean model G. K. On this truck the exhaust valve should close 5 deg. past top dead center, which is about 11/16 inches on the flywheel. If you really have a model G. A. truck it should be timed with the exhaust closing 5/16 in. past top dead center as measured on the flywheel.

stall this would be through the shop where it would consume considerable valuable space. If you want to have a drive through, would suggest a doorway at A so that cars can leave via the rear part of the lot.

Your filling station need not be as long as it is, 60 ft. being really sufficient if you enter it from the side street. One pump could be about 16 ft. from this side line

By Tom Wilder

and the other 18 or 20 ft. further. Then the last 22 ft. could be used for either an extension of the shop or possibly you might want to handle a car sometime in the future and this could be turned into a showroom.



READERS' CLEARING HOUSE

LEGAL QUESTIONS ANSWERED

By Wellington Gustin

KEEPING COMMON LAW LIEN ALIVE

Q.—We are asking your opinion concerning a matter which our attorneys have thoroughly considered but are unable to agree on:

We have taken possession (peaceably) of an Essex coach that has been in our garage about a year or so. It came to a point where we deemed it necessary to hold this car for the bill that has accumulated against it. The owner of this car is about 20 years old and has been driving automobiles for about four years in his own name, independent of his parents.

There is also, in regular form, a lease against this car with deferred payments that is held by another garage man. This bill consists of oil, gas, labor, etc.—Pennsylvania Reader.

Your own attorneys should be able to best advise you because they have gone deep into the case with all the facts in hand. But since they do not agree our comments on the law as applied to the facts as set out by you may be helpful.

In the first place the state of Pennsylvania does not appear to have given the garagekeeper or repairman a statutory

lien for repairs or labor or materials or storage furnished the car owner. Then the only lien you have is the common law lien for repairs, etc. which gives you the right to hold possession for payment of charges. This lien is lost upon giving up possession of the repaired article. Nor is the lien restored by additional repairs being made unless it can be shown that the additional repairs were but a continuation of and part of the original repairs. But of course the repairman would have a lien for the additional repairs in any event and could hold the car for these last repairs. So if the car has been kept in your garage and used by the customer from time to time, you would not have this lien on the car for any but the particular repairs made at the time you decide to and do retain possession of the car as a means of collecting your charges.

You understand that under the common law lien, the giving of credit to the customer is contrary to the intent to withhold a car and claim the lien.

Answers to Readers' Questions



This Brake Test Was Too Thorough

Being a subscriber to MOTOR AGE for a number of years, I thought the following information might be of interest to some mechanics:

The car in question is a Baby Grand Chevrolet. After installing a pinion and drive shaft bearing, I inspected the ring gear assembly. After checking and assembling the complete assembly I relined the brakes. It has been customary with me when adjusting the brakes partly to raise the rear wheels, start up the motor and run in the brakes by applying the brake pedal or lever gradually. This is done to wear down the high spots for in some cases a car may be listed for lining $\frac{1}{2}$ in. in thickness and $\frac{1}{8}$ in. is used. The extra $\frac{1}{8}$ in. thickness is $\frac{1}{8}$ in. more thickness in the diameter of the brake shoe or band.

That is the reason I generally run in the brakes. After running in the brakes I tried turning one wheel by hand to see if the brake was dragging. I then turned one wheel and the opposite wheel would turn at the same speed in the same direction. I lowered one wheel on the floor, started the motor, shifted into low and let the clutch out slowly, only to have the car run off the other block instead of the wheel turning. I knew if I took the car out and drove around a corner, something would have to break, as one wheel would have to turn faster than the other. The only thing I could figure out was a tooth broken off a spider gear and lodged between the gears making both axles one solid axle.

Reader's Solution

Upon removing the assembly and disassembling it I found an axle gear or side gear at it may be called, frozen in the differential case so tight that it had to be pressed out of the case. When I first assembled the parts that gear had about .015 clearance between the gear case. This is my solution of the trouble. When I was in the car running in the brakes, one wheel stopped on account of one brake being tighter than the other. This permitted one rear wheel to do all the turning and of course caused the internal gears of the differential to rotate at comparatively high speed. At this speed the grease from the differential did not work into this gear fast enough to properly lubricate it with the result that the friction increased and the gear froze, with the result above described. I believe this is figured out correctly and am sending it to you for approval.—H. P. McNamara, West Side Garage, 856 Mahoning Ave., Youngstown, Ohio.

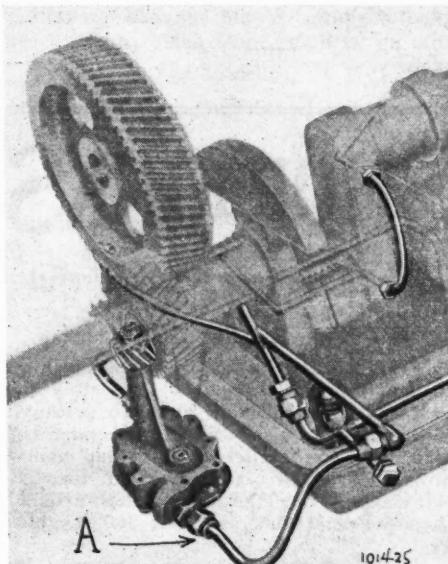
The explanation sounds reasonable. The plain differential bearings which came into

action do not ordinarily have to operate at such a high rate of speed.

TOO MUCH CHOKE, NOT ENOUGH HEAT

Q.—We have a special six 1925 Studebaker which is giving us trouble by diluting the oil in the crankcase. We have installed new rings but the trouble continues.—Frackville Sales & Service Co., 220 S. Lehigh Ave., Frackville, Pa.

At the left side of the engine on the intake manifold is a lever which can be turned to the on or off position. This controls the amount of heat going to the carburetor. In this weather it should be left in the on position. We believe that the trouble is due to heavy gasoline which is not sufficiently heated, rather than to oil, pistons or rings. Another possibility is that the carburetor is adjusted to give too rich a mixture. A third possibility is that the driver of the car operates with the choker too far out.



Lubricating system on 4-cylinder Oldsmobile

OIL PUMP MAY BE PUMPING AIR

Q.—We are having trouble with a 1920 model, seven passenger Chalmers. The oil pump does not show any pressure at the gauge and the gauge is O. K. All connections were tightened and the pump was primed, but with no results.—Dott Chandler, Service Garage, Granbury, Texas.

On this car the oil line comes up to the cylinder blocks and connects with a cored hole in the casting. At this point it is soldered. Soldering to a casting is a difficult job and leaks occur at this point. If this happens it means that the pump draws in air instead of drawing up oil. Applying high pressure to this line does not show up anything, but blowing through it gently with oil squirted around the connection between casting and tube will by means of oil bubbles show any leaks which may be present.

Poor Bearings Cut Oil Pressure

Q.—An Oldsmobile four cylinder car gives trouble with the oiling system. When cold the pressure is 8 or 10 pounds, but it drops to zero when the engine is hot. If allowed to idle the pressure comes up and goes down again after the car is driven two or three miles. The engine has been overhauled, a new pump installed and all connections tightened.—Frederick H. Betz, 36 E. White St., Summit Hill, Pa.

We believe there is excessive leakage at the main bearings. We are showing an illustration of the Oldsmobile lubricating system. To test for leakage at the bearings disconnect oil pipe A. Now take a one gallon oil can and run a copper tube from the oil can to pipe A. Next solder a tire valve in the oil can, fill the can about half full of oil and apply some air pressure to the tire valve. This will force oil under pressure to the engine lubricating system and you can then remove the oil pan, get underneath and find out whether the oil drips slowly from all bearings or whether it comes in a flood from any one. If so, that bearing needs to be refitted. Such a condition would account for the gage reading dropping off as the engine gets hot.

ENGINE OVERHEATS—TIMING SUSPECTED

Q.—Give valve timing on a 1918 Hudson. Engine is giving considerable trouble due to overheating. Have checked water pump, radiator and ignition. Engine steams after a run of four or five miles. Pistons slap and stick after engine gets hot.—R. H. Herks, Lane & Fosdick, Atkinson, Ill.

The exhaust valve should close 8 deg. after top dead center. The intake opens at about the same time. This would be approximately 1 inch past top dead center as measured on the flywheel. One possibility is that the weights in the automatic advance of the ignition unit are stuck and do not advance the spark at high speed. At low speed the interrupter points should open with the piston on top dead center. According to our data a water pump was used in the cooling system. You might check to see that there is no slipping of the pump blades with respect to the shaft, either in the pump or at a coupling.

HERE'S HOW ON A MAXWELL

Q.—Tell how to remove the camshaft from a 1923 Maxwell, as some of the valve tappets are worn on the flat part and need replacing.—C. H. Owen, 1419 Lakewood Ave., Lakewood, Ohio.

Remove the cylinder head and the oil pan, also the radiator. Next remove the front gearcase cover, also remove valve springs and take the valves out. Next remove set screw which holds the front camshaft bushing. The whole camshaft with gear may then be removed.

Answers to Readers' Questions

A Trick Fitting Pins to Aluminum Pistons

Q.—In a model 6-93, 1925 Overland there is a knock which almost stops when the third cylinder is shorted. We tightened all connecting rods and the main bearings, also saw if exhaust and intake valves were sticking, but the knock is the same as before. Just how tight should piston pins be fitted in split Lynite pistons in this particular engine? Should the weight of the piston be sufficient to cause it to turn on the pin. The piston has no bushing, so would it be necessary to replace piston also?—Davis Elsberry, Cande, N. D.

You probably need to replace the piston. The pin is correctly fitted when it is so tight that a force of five or six pounds is necessary at the end of the connecting rod in order to cause the pin to turn, this test being made with the piston cold. The correct way to install the pin is to dip the piston in boiling hot water and then quickly push the pin into place. Under these circumstances it should be a good snug fit by hand, and will then probably check up with the five or six pound test on the end of the connecting rod when the piston has cooled off. If you have an ordinary fit as would be the case with iron pistons or with aluminum pistons and bronze bushings, you will have too much clearance due to the expansion of the aluminum when hot.

Q.—How much clearance should the piston and cylinder wall have.

Between .003 and .004 inches.

Q.—What is the proper valve clearance? Is .003 in. and .004 in. too close?

We believe that .004 in. should be about right for either valve with engine hot.

POOR VAPORIZATION MEANS POOR DISTRIBUTION

Q.—What causes the two front cylinders of all model Fords to soot up and dirty the two front spark plug porcelains when cylinders are not pumping oil?—W. L. Hartwell, Coal Valley Motor Co., Montgomery, W. Va.

We believe that a condition of this sort is due to unequal distribution of fuel from the intake manifold to the different cylinders. The distribution is greatly improved by the use of a hot spot manifold.

TAKE EVERYTHING ELSE OFF FIRST

Q.—How do you take the crankshaft out of a late 1923 Maxwell?—B. F. Myers, Submarine Base, Pearl Harbor, Honolulu, Hawaii.

Remove gearshift levers and take the whole engine out. Remove transmission and flywheel. Remove cylinder head, engine pan, pistons and connecting rods. Remove timing gears and oil pipe. Remove center main bearing cap. Pull front main bearing forward and take it out. Remove crankshaft by loosening up rear main bearing and taking out crankshaft and rear main bearing together.

STOPPING OIL LEAK ON CAR

Q.—We have a Chalmers model Y, series 1923, which leaks oil. It does not seem to be at the rear main bearing although the flywheel housing accumulates oil. Sometimes it leaks a lot of oil and sometimes very little. We also note that the engine has a tap when the oil is not leaking which sounds like a piston slap.—J. D. Delperdang, Tripp, S. D.

We believe the oil is leaking between the crankcase and cylinder block at the rear main bearing. Two pieces of cork should be used, these being part number D-A-162 and being known as rear main bearing cork. These stop up the crack between the cylinder block and crankcase and keep the oil from splashing into the flywheel housing.

We do not believe there is any connection between the oil leak and the noise. On some of these cars a camshaft was used which was quite noisy and in many cases was replaced with a different type of shaft. Would suggest you taking this up with the local dealer or with the factory.

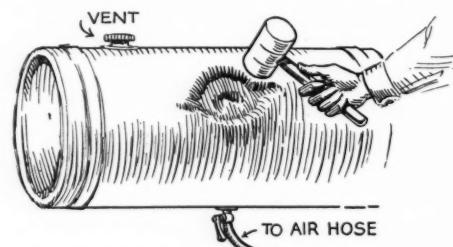
SHOP KINKS IDEAS

That have been Found Useful

To Remove Gas Tank Dents

When a cylindrical gasoline tank has been dented, it can be repaired by sealing the vent and applying about 20 lb. air pressure, the tank being nearly filled with water. A lead or wood mallet used to tap gently around the edges of the dent will then result in restoring the tank to its original shape.—Francis Wagner, Box 108, Lykens, Pa.

(MOTOR AGE comment: Gasoline in the tank should work as well and would not necessitate care afterward in getting the water out. It would also make it possible to do the job on the car in some cases.)



Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.

Valve Trouble Imaginary Says This Reader

Q.—First I am going to compliment the service rendered in the Reader's Clearing House. You certainly meet all comers, but in regard to the question asked by Kallio & Newell, Red Lodge, Mont., on intake valves in a Knight engine issued dated March 11th, I am going to say something. They received an answer to their question, yet they are in the dark, and that is a very interesting question and one worthy of a thorough explanation. Kallio & Newell and the majority of other mechanics know that when the exhaust port closes at top dead center the engine will run. Suppose, however, you take a customer's engine down and put it back and find that all ports are closed practically on top dead center. Then see how much you sleep that night. The explanation is very simple. The closing of the ports on top center is only found when the cylinder head is removed. This is due to the fact that the cylinder head extends down into the inside sleeve and is fitted with a large ring sometimes called a junk ring. It is against this ring and not the outside sleeve that the intake port seems to close. When in actual service the apparent operation of the valve in this position is entirely covered up by this junk ring and does no harm.—W. M. Farrell, Inspector of Motor Vehicles, Continental Oil Co., Kansas City, Mo.

This information should be very helpful. We have given information on checking valve timing on a Knight engine a number of times and have always recommended removing the exhaust manifold and checking the action through the exhaust port. Having this method in mind the trouble experienced by Kallio & Newell with the engine disassembled did not occur to us and together with the Motor Age readers we wish to express our appreciation for this helpful letter.

A KNOCK HARD TO FIND—BUT HE FOUND IT

Q.—I worked on an Overland six the other day that had been in several garages where they could not find the knock. It had me guessing awhile until I found it was in the camshaft. The front thrust washer was worn and had allowed the camshaft to go too far back and the oil pump eccentric was hitting the exhaust push rod. I thought this information might be of some help to others.—H. J. Holup, Marion, Kans.

Thanks very much. Other Motor Age readers will be able to profit by your helpful contribution.

THE IMPROVED OPERATION IS FELT

This is to thank you and also the California reader very much as to advice given me on squeaking valves in a Nash six. The California reader says this is often caused by neglect in lubricating the valves. I placed a piece of felt 6 inches wide and $\frac{1}{2}$ inch thick over the rocker arm and soaked it with oil which seemed to do the trick. It keeps the rocker arms and valves well lubricated.—Western Reader.

Clearing Up Electrical Troubles

A Third Brush Connected Nowhere

Q.—We have a Remy generator model O. D. on a Stutz roadster, 1916 or 1917. The generator charges over 20 amperes and we have not been able to remedy the trouble. The owner had a set of bulbs burn out before coming in. My first guess was a poor connection between the generator and battery, but the connection seems to be o. k. The third brush is set in a permanent bakelite socket and apparently is non-adjustable and is not connected to the field circuit. The generator was removed and we found a field coil burnt up and the third brush stuck fast in its holder.

The main brushes were worn about half way down and bearings were in bad shape. We put this generator in good condition and found that it still charged 20 amperes. I believe that the third brush should be connected to one end of the field coil in some way or other but this was tried without changing the charging rate at all. Furnish wiring diagram of generator, if possible. Owner claims generator was O. K. before without third brush being connected in any way to the field or any other terminal.—Ohio Electrician.

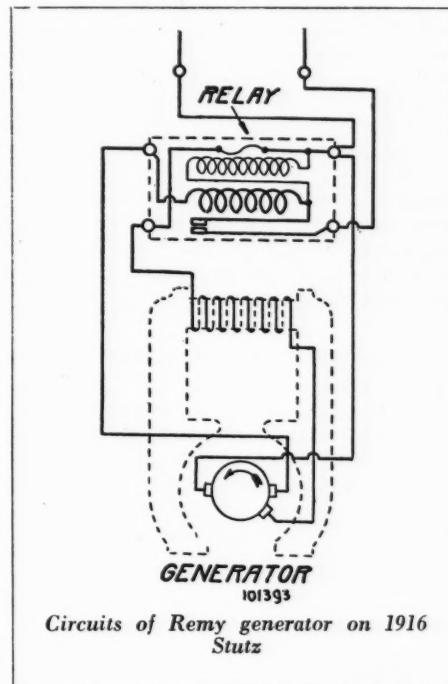
Generator Internal Circuits

We are publishing the internal circuits of this generator which show clearly that the field should be connected to the third brush. The other end of the field circuit goes up to the relay and apparently goes through a fuse and then back to the main brush which is nearly opposite the third brush. The owner may be correct in stating that for a long time the field winding has been connected to the main brushes only, for some mechanic working on the generator may not have properly connected it. This would make it a straight shunt machine and would account for the high charging rate, which, however, would cause no trouble if the car were not run for long periods of time. At some time or other, however, a long trip would be undertaken and then the difficulty you describe would result. With the connection shown in our diagram it is essential that the armature rotate as shown by the arrow. If it turns the other way then it will do no good to connect the field winding to the third brush for the shifting of the magnetism will make the field current stronger instead of weaker. It may be your trouble. Would also recommend your disconnecting wires from all brushes and testing the brush holders to make sure that none of them are grounded or shorted together.

The best way is to run the engine and have the generator charging the battery and then take voltage readings between the plus and minus wires and at different parts of the charging circuit all the way from battery to generator. If considerable variation in voltage takes place between two points as you make

Edited By A. H. Packer

the test it shows a high resistance between those points. For example, if voltage at two sides of the ammeter shows a difference of .9 volts it would indicate a high resistance in the meter which would account for the bulbs burning out and the field winding becoming overheated. If the battery is always kept fully charged it would also account for the bulbs having comparatively short



life. According to one of our wiring diagram manuals the third brush holder is adjustable on this generator.

BETTER USE HORN OF RIGHT VOLTAGE

Q.—Is it possible to use a 6 volt horn with a 12 volt battery by using a resistance? If so, please tell how to make resistance.—Harold Woodward, R. F. D. 6, Box 4, Dover, N. H.

Some horns, such as motor driven horns need a fairly heavy current when the button is first pressed. If this is the case the resistance would get you into trouble, for it would cut down the voltage too much if properly designed to give 6 volts to the horn after the horn motor speeds up. You might try connecting the horn to one half of the battery, although this will slowly run down that portion of the battery to which the horn is connected, more than the other half. The best thing to do is to have the right horn for the car. You could, if you wish, try resistance made of nickel or iron wire, or German silver wire, the latter being best.

Too Much Regulation for High Speed

Q.—We have remodeled a Dodge Brothers $\frac{3}{4}$ ton truck and installed a Ford one ton rear axle. Now the engine runs so fast with this rear axle gearing that the generator cuts out too soon. How can we change this generator to charge steady at 6 or 8 amperes and not cut out so soon.—Bert M. Hennis, Strasburg, Ohio.

One possibility is that you are getting too much of the third brush characteristic and the other possibility is that the commutator and brush contact is not perfect. If the commutator has ever been turned, without rotating it on its own bearings, it may account for the trouble. Another possibility is high mica or brushes worn down or weak brush springs. If the trouble is entirely electrical and the mechanical condition is good, then you might install an iron or German silver wire resistance in series with the field and then move the third brush farther along to make up for the resistance.

If you install a sufficiently high resistance iron wire coil, you might connect it in place of the fuse and you could then disconnect the wire from the third brush and connect it to one of the main brushes. You would then have a straight shunt machine instead of a third brush machine and you would have to experiment with the length of the iron wire coil in order to get the correct charging current under average conditions.

LOOK TO BATTERY FOR TROUBLE

Q.—Where can we buy a hydrometer that will give an accurate reading. We have tried several cheap ones but they do not seem to be accurate. When a battery is strong enough to turn the motor over they only show about 1150 specific gravity.—Tennessee Repair Shop.

We do not believe that the hydrometers you use are inaccurate. If the battery is old it is likely that the gravity is low due to acid having been spilled out and replaced with water or else due to material shedding from the plates and falling down into the sediment chambers which has the effect of taking acid out of the solution. A good book on battery repairing will be recommended to you by separate letter, this book giving the information you need along these lines. The best way to check up the gravity is to put a battery on charge until the voltage comes up to 2.5 volts per cell and the battery is gassing freely. Then allow the battery to stand until the bubbles get out of the electrolyte. This may take several hours. Then if the gravity reading is low it shows that some of the solution should be taken out and 1,400 acid added to bring up the gravity to 1,280 or 1,300.

NEW ITEMS OF SHOP EQUIPMENT

Pilley's Carbon Removal Set

THIS outfit consists of several wire brushes to be used in connection with an electric drill for removal of carbon from cylinder heads, pistons, ports, valve stem guides, etc. The brushes are shaped for the particular job they are to do. The price of the set is \$10, all being mounted in an oak finished case. Made by The Pilley Packing and Flue Brush Mfg. Co., 608 S. Third St., St. Louis, Mo.

Badger Valve Tool

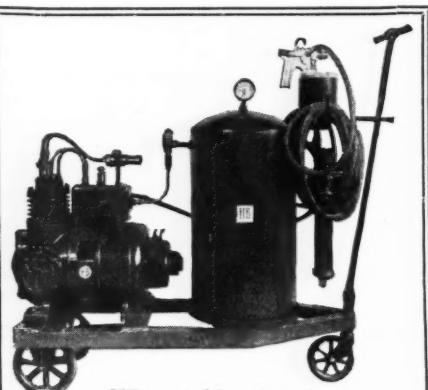
WITH the Badger valve tool the valve as well as the valve seat are both cut with the same cutter. The Badger is forged from a disc of tool steel hardened and tempered. The internal cutting edges for refacing the valve and the external cutting edges for the valve seat are ground and said to be absolutely parallel. This is said to insure the valves and seats being perfectly matched. For re-cutting valve seats the cutter is screwed onto the pilot and locked by the hexagon body and cap. For refacing valves the cap is removed and the cutter put in its place. Either the valve stem or the tool may then be gripped in a vise, and the valve faced with slight pressure. The

price is \$5 complete. It is made by the Badger Tool & Mfg. Co., 132 S. Clinton St., Chicago.

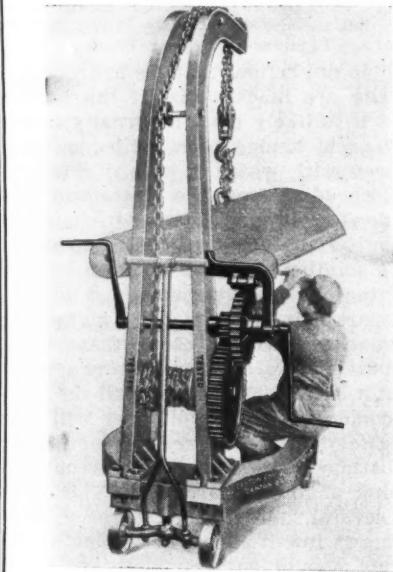
The HB Portable Air Unit

THE HB Silent Twin heavy duty compressor made by Hobart Brothers Company, Troy, Ohio, has a capacity of 8 cu. ft. per min. with 85 lbs. maximum pressure. It includes all regular HB features such as seamless copper tubing, check valve, safety valve, oil and moisture drains, air filter, HB ball bearing compressor type motor, silent spiral bevel gear transmission, pressure gage, etc. The heavy duty 15 gal. tank is mounted with the compressor on a steel truck with one 6 in. and two 8 in. rubber tired wheels. 25 ft. of electric extension cable is fitted. It can be furnished either with automatic start and stop pressure switch or with an arrangement for continuous operation at a given pressure.

The paint spray equipment complete consists of the spray gun, cup, 25 ft. hose with convenient receptacles when the equipment is not in use. The air unit is 33 in. high, 18 in. wide and 48 in. long and the price is \$325 complete.



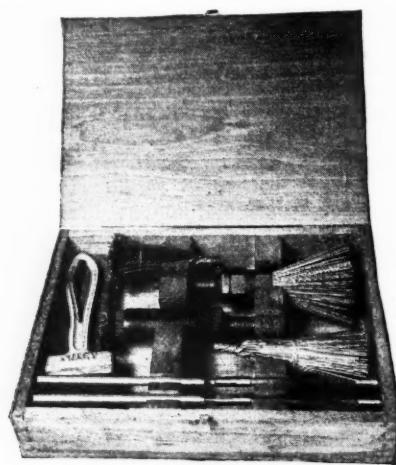
HB portable air unit



Canton portable crane

Canton Portable Crane

THE feature of the Canton portable crane made by the Canton Foundry & Machine Co., Canton, O., is a safety friction load brake. With this brake the load is held at any point and cannot under any condition get away from the operator. It insures safety to the operation and also to the work being handled. It complies with the Safety First laws of the country and some states are now demanding load brakes on all types of cranes. The brake operates by means of friction discs in connection with the helix and is so designed that the pawl is always engaged in the ratchet. This safety device can also be installed on Canton cranes now in service.



Pilley's carbon removal set

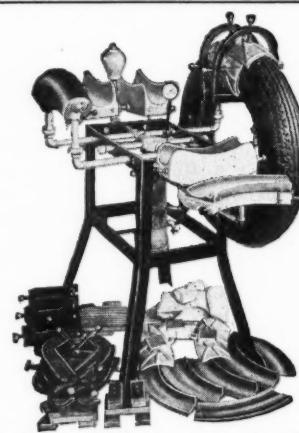
Anderson Vulcanizing Machine

ANDERSON Steam Vulcanizer Co., 1123 N. Hamilton avenue, Indianapolis, Ind., has brought out a new balloon tire vulcanizing machine. The new machine is offered in two models. One combines both the cavity molds for regular tires, and the new "inside curing arm molds" for balloon tires. The other model is for balloon tires only.

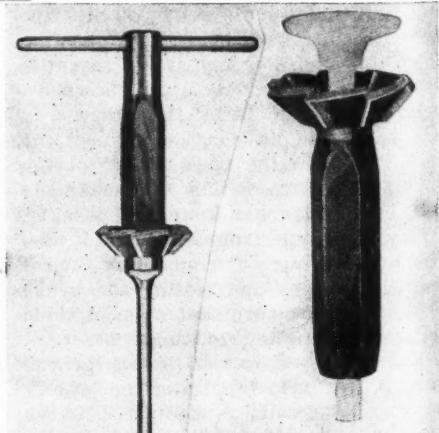
A feature of this vulcanizer is the super-heated steam boiler which is used on both balloon and regular models. It is made of heavy steel tubing, is only 2 in. in diameter, 16½ in. long, and is tested to 200 lbs. hydraulic pressure and 90 lbs. steam pressure. This machine is compact and is furnished complete with all the sectional molds, curing arms, clamps, bead plates, bench shoes, etc., needed on tires from 4.40 to 7.30 sizes.

Ammeo Connecting Rod Aligner

IN the April 8 issue of MOTOR AGE, page 29, the above product, made by the Automotive Maintenance Machinery Co., was described, but the address of the manufacturer was omitted. It is 549 W. Washington St., Chicago.



Anderson balloon tire vulcanizing machine



Badger valve tool showing its use (left) as a valve seat reamer and (right) a valve refacer

SOME NEW ACCESSORY PRODUCTS

Acme's New Trickle Charger

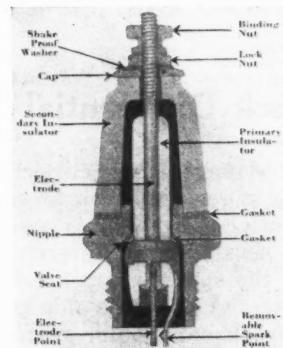
DEVELOPMENT of a new Trickle Charger has been announced by the Acme Electric and Manufacturing Company, 1424 Hamilton avenue, Cleveland, Ohio. This trickle charger uses a 2 ampere tungar bulb in its operation with a special designed transformer with independent windings. The charging current delivered ranges from $\frac{1}{2}$ to $\frac{3}{4}$ amperes and consumes 25 to 40 watts of energy. The case is made of sheet steel, finished with crystallizing lacquer and is mounted on rubber feet. Price without bulb \$6.

Reliable Spring Covers

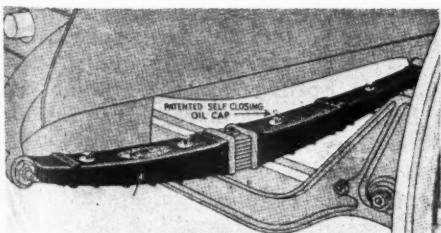
THE Reliable Spring Oiler Co., 232 N. Fourth street, Columbus, O., is manufacturing a line of spring covers. These covers are laced around the springs and are produced in genuine leather and in "prepared leather cloth" which is claimed to be weather and oil proof. A tongue at the bottom of the cover, at the point of lacing, prevents the cover from leaking, the lubricant being introduced at the top through fittings. Either self-closing oil cups or Alemite fittings are furnished.

Multibestos Busduty

THE Multibestos Co., Walpole, Mass., has developed a new brake lining for use on buses, trucks and cabs and it is claimed that it can be used with mild steel brake drums. The manufacturers also assert that efficient braking is obtained in all weather conditions.



White Ace Spark Plug



Reliable Spring Oiler Cover

Three New Rainbo Products

THREE new products are offered to the accessory trade by the Rainbo Accessories Company, 1420 S. Michigan avenue, Chicago. They consist of a "Guaranteed Unbreakable Gear Shift Ball," the "Rainbo Trumpet" and the "Giant Grip Auto-Gram." The gear shift ball is made in all combinations from 11 basic colors and can be stocked in an attractive counter display box—18 units being packed in each box. The item comes complete with all necessary bushings. It measures two inches in diameter and lists at \$1.25.

The Rainbo Trumpet is a horn for all open or closed cars, but it has a particular appeal to the owner of the sport model. This is a brass horn entirely nickel-plated and having a high polish. The bulb is of durable rubber and a bracket is furnished. The Rainbo Trumpet lists at \$2.50.

Giant Grip Auto-Grams offer distinctive and attractive initial emblems for the car, serving for decorative purposes and identification of the vehicle. They are of nickel-silver with blue Duco background. Cement is furnished and they are guaranteed by the company to hold. List \$1 per pair.



Rainbo Trumpet



Rainbo Giant Grip Auto-Gram



Rainbo Unbreakable Gear Shift Ball

"White Ace" Spark Plug

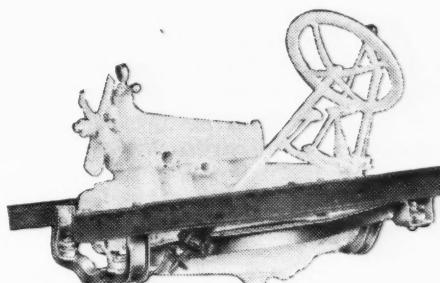
MADE in all standard sizes the "White Ace" Spark Plug is a product of the Automotive Appliance Company, 1712-14 Ludlow St., Philadelphia, Pa. Simplicity, durability and economy are claimed for this plug by the manufacturers. Among the merits listed by the makers are the following points: Easy to take apart and clean by using only a pair of pliers; any part may be replaced without buying an entirely new plug, gives exceptionally hot spark; stands much abuse; few renewals from breakage; will not be short circuited by water or moisture; fires successfully with low-grade fuel; points do not burn; made of best materials; leak-proof and water proof; doubly insulated. The price is \$1 each.

L. & S. Vibration Eliminator

A DEVICE which has been designed to insulate the chassis and body of the car against vibration and rumble of the engine is being produced by La Mere & Sardeson, Inc., 1900 Central avenue, Minneapolis, Minn. It is called the L. & S. Vibration Eliminator and is manufactured in separate units for Overland and Chevrolet cars. This equipment consists of a sub-frame bolted to the engine and connected with the chassis in such a manner that four heavy coil springs absorb the vibration. Two cross members are used, thus adding strength to the chassis. The makers say the installation will be found trouble-proof, outwearing the car. All parts are guaranteed against breakage for one year. L. & S. Vibration eliminators for either Overland or Chevrolet sell for \$30.



Acme Trickle Charger



L. & S. Vibration Eliminator

Does Good Business *in a Small Town*

(Continued from page 13)

ested while waiting in the salesroom and listening to the demonstrating set. The stock is limited to sets, loud speakers, tubes, batteries, chargers, and the like, no parts such as are used by amateur builders and experimenters being carried. Mr. Winzey expects the radio department to help keep up the volume of his business in the winter months when there is a natural falling off of his automotive business and thus aid in keeping him supplied with working capital at a time when it is most needed.

Battery. In the battery department complete battery service is given and most of the electrical service required on Overland and Willys-Knight cars is taken care of. An electric test bench is to be added to the equipment of this department.

Storage and General. With a building 66 by 134 feet Mr. Winzey is able to devote quite a bit of space to storage which he finds very profitable. In this department he also washes cars. Just now about his only washing equipment is a hose, but he expects to install a modern power washer that will reduce the time of washing a car from about two hours to 30 minutes or less.

Like other progressive automotive merchants, Mr. Winzey is constantly on the lookout for ideas that will improve his business. He reads *MOTOR AGE* regularly, not only the editorial section but also the advertising section. Most of the equipment in his shop and the merchandise on his shelves is well known to readers of the *MOTOR AGE* advertising pages.

Mr. Winzey has some definite ideas for the improvement of the automotive dealer's position. First, he advocates local city or county trade associations that will promote better merchandising methods among all the dealers. There is no dealers' association in his town or county, but he would like to see one organized.

He believes the dealer can do better by making his own contracts for financing time payment sales, rather than accepting so-called factory financing plans.

He believes the factories could well afford to set aside amounts at a fixed ratio to reimburse dealers for taking the very old used cars off the market and junking them.

He believes the dealers in the small towns are not getting a fair deal in most of the factory national advertising plans calling for a certain sum per car from each dealer which, he says, is used mostly in the larger city newspapers and in magazines.

But all in all Mr. Winzey has faith in the automobile business. He has been connected with it in one capacity or another for more than 20 years and he sees in it a good business opportunity.

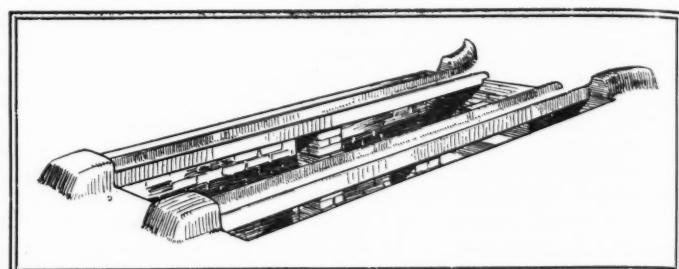
Solves Trade-in Problem

(Continued from page 11)

When he reaches this number, before he can get additional leads from the office, he must either sell one of his 35 or take one or more off his list as "dead."

When a man is given a name, this person is his exclusive prospect until he discards him to the "dead" file. When a name is discarded by any man, however, it is not always thrown out by the office as being of no value. It is placed in the "dead" file, where any salesman on the force may work upon the prospect at any time and get the commission on the sale.

"By limiting the men in number of prospects they may have," explained Mr. Scouten, "we are able to keep all our prospects alive as long as they are on the active list. When



Sketch of the greasing pit constructed by Joseph R. Winzey. The top is level with the concrete floor. The walls are bricked up. Steel I-beams turned on their sides support the wheels. The pit is enough wider than the track that there is room for a workman to stand upright outside the wheels on either side. Dimensions of the pit are: Depth, 45 inches; length, 15 feet; width, 8 feet.

a salesman gets a name he realizes that he must do something with it soon, for if he doesn't, he is letting it block the way for additional new names. He knows that he must push names off his list continually, either by selling them or deciding that they can't be sold by him, so that he can get new ones. This keeps a man from 'hoarding' a name indefinitely, with the hope that he will eventually be able to sell it. It eliminates indefinite prospects from our live list."

When a prospect's name is secured it is placed on a "Prospect Record Card," which is in triplicate. This gives all the data necessary on a prospect for the company and the salesman. This form, which is only about two and a half inches high and four inches wide, is made out in triplicate so that there is a copy for the salesman to whom the prospect is allotted, one for the company's alphabetical file and one for the date file.

Even though the Drennen Motor Company handles more than a thousand used cars a year it doesn't have a "used car problem" for the reason that the used cars are "bought" instead of being "traded for," and are merchandised on a regular profit and loss basis, just as any other business is run.

New Scurlock Differential

(Continued from page 17)

From the standpoint of strength the Scurlock positive drive differential has much to recommend it since there is by far a greater area of tooth contact than is possible with the conventional type of bevel gear. Reference to the illustration will show that the spider gears are in contact at all times with the four teeth cut on the side gear, since the teeth on the side gear overlap and a side gear in revolving about the spider gears, does so that no strain or wear comes on the end of the tooth because the spider gear in leaving one tooth has previously come in contact over a portion of the adjacent tooth.

Production at the present time will be concentrated on replacement units for Ford cars and trucks, Chevrolet cars and trucks and the Fordson tractor. Manufacture also will begin on replacement units for other sizes and makes of motor vehicles. Officials of the Scurlock Differential Corporation include L. H. Scurlock, president; J. W. Fulton, vice-president and director of sales; R. S. Dean, Western manager of Manning, Maxwell & Moore, Inc., vice-president and treasurer; J. W. Fulton, Jr., secretary; and F. J. Baumis, vice-president of Manning, Maxwell & Moore, Inc., director.

EDITORIAL

Full Value in Batteries

THE Better Business Bureau of the Associated Advertising Clubs of the World recently saw fit to issue a special bulletin dealing with deceptive automobile batteries marketed by certain unreliable manufacturers and dealers.

The bulletin described how batteries advertised as having certain capacities were purchased and tested and found to fall far short of the advertised capacity. It was found that the deception was aided by the use of oversize boxes to contain the interior and skimped plates. Of course these batteries were being sold at prices which appeared to be very low for batteries of their size and supposed capacity. Actually the purchaser was paying dearly for such batteries because they could not be expected to last long in the service that would be required of them.

Good batteries are available for all dealers to sell. The better manufacturers, with honorable reputations to maintain, will not stoop to the deceptions practiced by those makers and dealers investigated by the Better Business Bureau.

And the well known, honest manufacturers are today producing good batteries that can be sold at prices practically as low as are asked by many of the shady makers for inferior goods.

In the battery business, as in other divisions of the automotive industry, it pays the dealer to stick to standard goods made by manufacturers whose honesty and integrity are beyond question. You just can't get something for nothing in the economic scheme of things. Good merchandise commands a fair price while inferior articles can be bought cheaply.

A new car in the family means money spent for upkeep just as surely as does a new baby.

"Price" in Advertising Copy

A DEALER who had been using advertising copy in local promotion which carried the price of the car in very small type and so subdued that it failed to attract a reader's immediate attention decided to do some experimenting. The ads had not been "pulling" as much as it was desired and meditation convinced this dealer that the weakness was in the tame manner of displaying price.

So the plan of copy writing was entirely upset and the next ads appearing in the local papers instead of featuring price very timidly—led off with the price and it was displayed in large conspicuous type.

An improvement in effect was almost immediate. The ads picked up in "pull." One buyer known to have been brought in through the ad volunteered that he had no idea the car he took could be purchased so cheaply. Incidentally, but perhaps very importantly, the price quoted was "delivered." The car was in the medium price field. Here is a successful dealer who is thoroughly sold

on featuring price. He does it in used cars the same as new cars, regarding copy that does not feature price as much weaker than it should be and at times practically of no value. Not only does he believe in featuring price but in making much of it. He believes that is the most effective way to make the prospect believe he is getting a wonderful value. His theory would hold good regardless of the price of the car.

In the first place he accepts the quite popular principle among progressive dealers that the great majority of prospects buy first "on price." They must be convinced before all else that the car you have to sell is within reach financially, not too cheap or too costly to conflict with their notions and purchasing ability. The buyer, in other words, first classifies himself as to price and the dealer who can offer him what he considers the most for the money at that price, according to his individual preferences, is the one who will sell him. Featuring price is the subject of an old question but we believe the practice is growing more popular than formerly with the trade on the whole. In used car advertising a tendency also can be seen to give more detailed information such as yearly model, equipment, paint condition, etc. The trade's line of psychology is improving. Advertising the mere fact that a car of a certain make and model is for sale means little or nothing to the average used car prospect.

Profit from the shop follows intelligent use of flat rates.

Sell Radio on Service

IT would be interesting to know how many automotive merchants handling radio are really merchandising their facilities for service. Radio business can be helped immensely through a servicing program and in this respect the automotive dealer has a big advantage, especially in smaller towns and communities, over other competitors for this business.

The small town's piano stores, drug stores, hardware stores and other institutions that are trying to edge in on the radio trade are unprepared as a rule to service their sales and they make no effort to sustain volume business on the basis of service.

When their buyers want service they often go straight to the automotive establishment.

The point therefore is: Why not make a greater effort to merchandise radio service? Make that a vital part of the radio selling policy. Let the public know that good servicing to the radio owner is as important as it is to the car owner. Make an especially attractive servicing proposition to the radio buyer who has bought his equipment from you and show him that buying from you, therefore, has a big advantage over buying from some other radio handler whose sole concern is the original sale rather than the continued satisfaction of the owner. The trade has not been making the best of its radio opportunity and every element of superior opportunity is there.

SALES 20 PER CENT AHEAD OF 1925

Several Plants Building Cars With Record Speed

Stocks on Hand Believed Not Too High to Supply Ready Delivery

NEW YORK, April 14.—With automotive sales showing the normal spring increases, the general situation in the industry continues to be satisfactory. There has been little change in the output rate at the factories, and several of the largest plants are turning out cars and trucks at record-breaking rates. Dealers' stocks of unsold cars are somewhat high, if comparison is made with the situation existing a year ago at this time, but sales so far have apparently justified the heavier stocking against the active selling season.

Sales to date this year are figured roughly as 20 per cent over those of the corresponding period of 1925. Production had been running until the last two or three weeks at an even greater rate of increase, but it must be considered that stocks held by dealers at the beginning of spring a year ago were inadequate to meet the demand that developed. Hence manufacturers are naturally desirous of having their dealers in position to give prompt deliveries at all times.

So far the factories have been in the main justified. Sales during the early part of the year were above the normal for the season, and this was taken to mean that spring demand would also be better than normal. This expectation has been borne out, and manufacturers reporting weekly sales show that each week in March and early in April recorded substantial gains over the week immediately preceding.

It cannot be ignored, however, that the heavy production of cars and trucks has placed serious burdens on the distributors and dealers. The pressure to sell new cars has piled up used car stocks mainly taken on trade-ins at a time when there was little demand for the second-hand vehicles. Many dealers in the last few years have learned the wisdom of conducting their used car transactions on a sound basis, and most of the factories are doing all in their power to help, but the fact that stocks of these vehicles are probably higher now than they ever were before emphasizes the need for even greater efforts to solve what is clearly the most serious problem of the industry.

Elliot Joins Willys

TOLEDO, April 12.—William A. Elliot, former St. Louis branch manager for the Dodge Brothers, Inc., is now affiliated with the Willys-Overland, Inc., accord-

ing to an announcement by officials of the latter company. Mr. Elliot will assume sales executive duties at once, it was indicated in the announcement. For more than five years Mr. Elliot has been associated with sales work for Dodge Brothers, both in the field and at the home office. For some time he was in charge of the Memphis branch for this company, and for the last two years was established in St. Louis as head of sales operations for Dodge Brothers in that territory.

New Company Organized

CHICAGO, April 12.—The Johnson Motor Products Co., an Illinois corporation, has been organized to absorb the manufacture and sale of all automotive product formerly produced by the Great Lakes Auto Products Co. of Chicago. The new company is comprised of the same executive and sales personnel that has directed the Great Lakes Auto Products Co. This company's products include the "Circlite" spotlight, "Life Timer" for Fords, "Circlite" stop signal switch and the Johnson hub lubricator.

Tampa Show Successful

TAMPA, Fla., April 12.—The first Tampa automobile show closed Saturday night after four days of excellent attendance. The paid attendance exceeded 10,000 and dealers and accessory concerns were highly satisfied with the buying interest displayed. Compliments were heaped upon the appearance and general presentation of the exposition which was under the management of Herbert Buckman of Cleveland, who was loaned to the Tampa Automobile Dealers' Association by the Cleveland Association of which he is permanent manager.

Larson Made Director

NEW YORK, April 12.—Charles H. Larson, of Cutting-Larson, Peerless distributor with headquarters here, has been elected to the board of directors of the Peerless Motor Car Co.

Star Sales Increase

NEW YORK, April 12.—Colin Campbell, vice-president Durant Motors, Inc., announces that Star car factory sales for the first quarter of 1926 exceed those for the first quarter of 1925 by 57 per cent. The figures for the period follow:

Month	1926	1925	Increase	Gain
January	4,968	8,405	3,437	69%
February	5,314	10,392	5,078	95%
March	9,915	12,898	2,983	30%
Total First Quarter	20,197	31,695	11,498	57%

McManus Takes Locomobile

DES MOINES, Ia., April 12.—W. H. McManus has been appointed district sales manager for the Locomobile Company of America and will open headquarters in Des Moines soon.

Tire Makers Look for Heavy Second Quarter

Most Plants Now Working on Full Time Following March Slack

AKRON, April 12.—While production of automobile tires was substantially curtailed during February and March, indications are that the second quarter will be one of the best in the history of the industry. Akron factories are steadily increasing tire output, and are expected to be operating at capacity by May 1.

Most of the tire manufacturers are now operating full time, on a three shift basis. The major companies were working five days a week last month, and the smaller concerns reduced operations to three and four days a week.

Total production in the Akron district is estimated around 125,000 tires a day, compared with an output of about 100,000 early in March.

Operations at the Goodyear, Goodrich, Firestone and Miller plants, which have been curtailed in some departments, are now reported on a six day a week basis.

Officials of the General Tire & Rubber Co. announce that the plant, which was working four days a week, is again on full time schedules.

Seiberling, India, Mason, Mohawk and other companies are reported increasing tire production from 15 to 25 per cent.

A large volume of orders is being received by tire manufacturers from both dealers and car makers, and reserve stocks are being steadily depleted.

New A. E. A. Members

CHICAGO, April 12.—The following concerns were elected to membership in the Automotive Equipment Association at the mid-convention meeting:

Jobbers

Brown Rogers Dixson Co., Winston Salem, N. C.; Buford Brothers, Nashville, Tenn.; Butler Brothers Co., Inc., Columbus, Ga.; Cameron & Barkley Co., Charleston, S. C.; Central Rubber & Supply Co., Indianapolis, Ind.; Chesapeake Auto Supply Co., Norfolk, Va.; I. J. Cooper Rubber Co., Cincinnati, Ohio; Forncrook Auto Supply Co., Flint, Mich.; Hagar Hardware & Paint Co., Burlington, Vt.; A. S. Hatcher Co., Macon, Ga.; Long Lewis Hardware Co., Bessemer, Ala.; Magic Auto Supply Co., Hartford, Conn.; Patrick's, Inc., Jacksonville, Fla.; Peden Iron & Steel Co., Houston, Texas; Wyoming Automotive Co., Casper, Wyo.

Manufacturers

Badger Rubber Works, Cudahy, Wis.; Billings & Spencer Co., Hartford, Conn.; Hardie Mfg. Co., Hudson, Mich.; Holley Carburetor Co., Detroit, Mich.; Irving Eng. Co., Buffalo, N. Y.; Watervliet Tool Co., Inc., Albany, N. Y.; Yellow Jack-It Mfg. Co., Chicago.

Mexico Adds 10 Per Cent To Car and Tire Excises

Government's Increased Expenditure for Roads Given As Reason

MONTEREY, Mexico, April 12.—An increase of 10 per cent in the tax on the sale of automobiles and tires has been made by the Mexican Government, effective March 27, which was the date of the decree. This additional tax came as a complete surprise to dealers, it is stated. The official decree, translated, reads as follows:

"On the first sale of automobiles, bills of sale must carry stamps for 10 per cent of the amount of the sale.

"On the first sale of tires for automobiles, whatever the price may be, bills of sale must carry stamps for 10 per cent of the amount of the sale and a factura must be issued for each sale.

"Subsequent sales of automobiles and tires are subject to stamp tax as provided for prior to the publication of this decree."

In explanation of the government's action in increasing the tax it is stated that the cost of constructing new trunk highways, which work is now in progress, is heavy and that automobile dealers are the chief financial beneficiaries of these improvements through the increased sales of automobiles and tires; it is therefore, deemed just and proper that the dealers should pay an additional tax to the government.

The 10 per cent tax which has been levied on the sales of automobiles will, it is expected, encourage the manufacture of tires in Mexico. It is stated that the guayule rubber resources as well as other conditions make the domestic manufacture of tires an attractive proposition. Dealers in automobiles and tires will make no protest against the new taxes, it is stated. The tax will be added to the sales prices.

Takes Marmon Sales

DECATUR, Ill., April 12.—The Reo Motor Sales Co. of Decatur has been appointed official Marmon service station and distributor for central Illinois territory of the Marmon. The appointment means that practically all service parts and cars for dealers in this field will come through the Reo Motor Sales here.

Buick Breaks Records

FLINT, Mich., April 12.—Twenty-five thousand three hundred and five passenger cars were shipped during March by the Buick Motor Company establishing a new high month for the company. Up to this year the previous high mark was in October, 1925, when 22,850 cars were shipped. January this year, 23,265 cars were shipped and in February, 23,294 cars were shipped. In the eight months since the current series was in-

troduced the company has broken by approximately 1600 cars its highest previous shipment record for an entire fiscal year. During this period practically every Buick production and shipment record since Buick was founded 23 years ago has been smashed.

Takes Auburn Sales

WASHINGTON, April 12.—The Auburn-Washington Company, Inc., has just been appointed distributors for Auburn motor cars by the Auburn Automobile Company in the Washington territory. J. V. Hall is president of the organization and his son C. V. Hall is secretary and treasurer and C. H. Mason, vice-president and general manager. C. H. Kerr is sales-manager.

Illinois License Revenue High

SPRINGFIELD, Ill., April 12.—The end of the first quarter of the current year found motor vehicle registration in the state near the million mark with license revenue in excess of \$10,000,000. License plates have been issued to 894,960 owners, while plates in the 900,000 series were being distributed from the secretary of state's office April 1. Revenue from the registered cars was \$7,947,778.02, not including 135,237 trucks with revenue of \$2,610,857.33; 29,274 Chauffeurs' licenses and 4,079 dealers' licenses, bringing the total fees to \$10,918,591.

Reeves On Tour

NEW YORK, April 12.—Alfred Reeves, general manager of the National Automobile Chamber of Commerce, has left on a ten-day tour of automobile plants in Indiana.

Peugeot Officials Here

NEW YORK, April 12.—Several officials and engineers of the Peugeot Automobile Co. of Lyons, France, led by M. Rosengart, have arrived here bringing with them samples of the Tartral heavy-oil engine. The party is stopping at Hotel Commodore and will soon leave for Washington and Detroit. The spokesman is A. Lebaubin, Peugeot export manager, and the other members are R. and E. Peugeot, M. Teinturier, general technical manager, G. Mrellard, body engineer, R. Shley, branch factory manager and A. Adelus, export salesman.

Takes Kissel Distribution

HARTFORD, Wis., April 12.—G. A. Kissel, president of the Kissel Motor Car Company, has announced the appointment of Harold Hills as San Francisco distributor for Kissel sixes and eights. Mr. Hills is a prominent figure in the automobile industry on the Pacific Coast, having been affiliated with various selling agencies of high grade motor cars for several years. An elaborate sales and service building has been opened up at 1910 Van Ness Avenue, with a complete line of late Kissel models on display.

Ford Operating Profit Is Placed at \$94,560,397

Net Is Estimated at About \$20,000,000 Below 1924 Because of Model Expense

BOSTON, April 12.—Profits of Ford Motor Co. were approximately \$20,000,000 lower in 1925 than in 1924, as nearly as can be estimated from the annual financial statement filed with the Massachusetts Commissioner of Corporations. Calculated on the basis of the year's increase in surplus, plus the usual dividends of \$14,670,000, operating profits were estimated at \$94,560,397, compared with indicated profits of \$115,105,416 in 1924.

Assets of the company are expanded, however, from \$644,624,468 to \$742,913,568, an increase made up of a \$20,000,000 gain in real estate holdings and valuations, a \$9,000,000 gain in machinery and equipment, a \$12,000,000 gain in inventory, and a \$57,000,000 gain in cash, receivables and securities. An item of \$20,517,985 carried as good will in the 1924 statement, is evidently included in the cash item this year, which is designated as including patent rights, etc. If the good will item has been written off the earnings were approximately \$20,000,000 higher.

The shrinkage in profits may be due to some extent to the large outlays made during 1925 for steel mill equipment, for additional real estate holdings and for new equipment in its main and branch plants incidental to its new models. The Ford company introduced a considerably changed line in September which in addition to involving large expenditure for new equipment, also threw the company out of systematic production for several months. This was the first time in several years that the company was obliged to absorb new model expense.

Earnings on each of the 172,645 shares of stock, held entirely within the Ford family, approximated \$547.71 as against \$667.48 the preceding year. On the basis of the new balance sheet, the value of each share is now indicated as about \$8,000, making the total stock valuation in excess of \$1,000,000,000.

Columbus Sales High

COLUMBUS, O., April 12.—County Clerk Harold Gockenbach in a report showing the number of sworn statements, bills of sale and new cars sold in March in Franklin County, shows an increase in business in new cars as well as used cars compared with March, 1925. During March, 1926, a total of 748 sworn statements; 5,557 bills of sale and 1231 new car papers were filed as compared with 440 sworn statements, 4,350 bills of sale and 995 new cars sold in March, 1925. New cars were 236 more numerous and used cars showed an increase of 1565 over the corresponding month last year.

Spokane Dealers Report Excellent Spring Sales

March Fulfils All Predictions and April and May Expected to Continue

SPOKANE, Wash., April 12.—The month of March proved true predictions made freely during the winter that Spokane and the Inland Empire would go through a period of unusual prosperity in the automotive industry this spring. New car sales of 31 makes represented here totaled 828, according to the monthly registration compilation of Spokane county by the Washington Automotive Trade Association. These are practically all Spokane county sales, although some of the registrations are for cars delivered here for dealers in other counties.

The used car registrations in the county totaled 712, new trucks 135 and used trucks 71. In the used car registrations there were 44 makes, including 11 orphan makes.

While it is not possible to obtain an accurate check on the retail sales or wholesale sales value of cars sold in this territory, the new and used car sales as represented by registrations here indicates a retail business of nearly \$1,000,000 during the month.

Conditions in the agricultural, mining and lumber industry continue good and wholesalers and dealers expect the months of April and May to continue strong, several dealers having trainloads on the way for arrival during April, although early March saw 10 trainloads arrive here for distribution. Inability to obtain all the cars its business can take care of has checked sales in the \$1,500 class of cars of one firm.

Dodge Bros. Sales Gain

DETROIT, April 12.—Combined sales of Dodge Brothers cars and trucks and Graham Brothers trucks for the week ending April 3 were 9,104, a new high weekly mark according to factory statement. The new figure represents a gain of 41 per cent over that of the same week last year when total sales were 6,458, and a gain of 11 per cent over the preceding week this year. Combined car and truck sales for the four-week period ending April 3 were 30,912 as compared with 18,516 for the four weeks of February this year. In view of inclement weather prevailing over the entire country in the week, the new high record is regarded by Dodge Brothers officials as an excellent sign of healthy automobile business.

Sets European Records

PARIS, March 30.—(By Mail.)—Driving a straight eight Panhard Levassor with a Knight type engine of 387 cubic inches, the amateur Ortman covered one hundred miles in 48 min. 30 50/100 sec., or at an average of 123.69 miles an

hour, and travelled a distance of 120.24 miles in one hour. Both these are claimed as world's records, and broke the previous records held by the same driver, but no account is taken of American speed records. They constitute the highest speeds ever attained by a sleeve valve engine and were accomplished on Monthlery track, near Paris, which has lower speed possibilities than the board tracks of the United States. The speed on the fastest lap was 126.1 miles an hour.

Ora P. Hand Dies

ROCKFORD, Ill., April 12.—Ora P. Hand, aged 50 years, president of the Burd High Compression Ring company, died at his home here after several weeks' illness. Mr. Hand was graduated from the University of Minnesota law school, entered trade journalism and finally established a trade paper in Minneapolis, became interested in ad club work and 11 years ago came to Rockford as advertising and sales manager for the Burd company. In a few years he was elected president of the company. Mr. Hand was a member of the Freeport Consistory, Scottish Rite Masons, Elks, Rotary and other civic clubs.

Bonds for U. S. Service Plant Are Underwritten

NEW YORK, April 12.—G. L. Ohstrom & Co. has underwritten a new issue of \$850,000 Chicago Postoffice Service Station first mortgage 5 1/2 per cent sinking fund gold bonds.

The Government is designing this station to maintain, repair and rebuild all its motor vehicles in the Middle West and it will be one of the largest and best equipped service stations in the country.

The proposed structure, representing a total investment of \$1,500,000, will stand on the south side of West Congress street between Morgan and Aberdeen streets. The Government has contracted to lease the entire building for 10 years at an annual rental of \$94,000 with optional renewal for the same period and at the same rate.

Concentrates on Radio

TOLEDO, April 12.—The Toledo Ignition company will discontinue its automotive lines in favor of concentrating on the distribution of radio and electric household refrigeration, it was announced here by C. B. Corbin, sales manager.

New Marmon Officials

INDIANAPOLIS, April 12.—R. E. Mitchell has been appointed production superintendent in the automobile division of Marmon Motor Car Co., and J. W. Anderson has been made mechanical superintendent.

Packard Six Months Net Quadruples Previous Half

Profit for Period Ending Feb. 28 Is \$8,002,358 Against Former \$2,954,745

DETROIT, April 12.—Packard Motor Car Co. net profit for the six months ended Feb. 28 was \$8,002,358, against \$2,954,745 for the preceding half fiscal year and sales increased from \$19,800,000 to \$36,750,000.

Volume production encouraged by price reductions with attendant lower overhead, as well as preferred stock retirement, contributed to the increase in the profit rate.

Current assets Feb. 28 were \$28,464,000 and current liabilities \$4,568,000, a ratio of more than six to one, compared with a 3.4 to the ratio for the preceding six months.

Cash and government securities on hand Feb. 28 were \$9,823,158, and during March this was increased to \$13,500,000, comparing with \$14,518,000 on Aug. 31 last.

Alvan Macauley, president, says the company's outlook was never better, with capacity operation expected for the remainder of the fiscal year.

Allows One-Fourth for Wear

WASHINGTON, April 12.—The taxable depreciation of automobiles has been placed at 25 per cent per year, according to a decision announced this week by the U. S. Board of Tax Appeals in holding that the Merkle Broom Company in its annual tax return might charge off that sum as depreciation. The board's decision virtually overrules the ruling of the Bureau of Internal Revenue which generally has allowed deductions of but 20 per cent per year. The company, a tax-payer in the state of Illinois, had charged off 33 1/3 per cent depreciation on its automobile equipment.

Maggi Wins Rome Prix

PARIS, March 29.—(By Mail.)—Driving his privately-owned 122-inch non-supercharged racing Bugatti, Count Maggi won the Rome Grand Prix, a distance of 200 miles, over a difficult and winding five-mile course in the suburbs of Rome, at an average of 61.6 miles an hour. Most of the competition in this race lay between Brilli Perri, winner of last year's French Grand Prix, who handled a 122-inch supercharged Alfa Romeo, and Count Maggi. Brilli Perri set up the record lap, but lost to the amateur on the Bugatti by the narrow margin of nine seconds. Count Bonmartini, on a 122-inch Alfa Romeo, finished second and the three following places were taken by Bugatti cars. Among the 12 who failed to finish were Count Mazetti and Albert Divo handling the six-cylinder 122-inch supercharged Sunbeams.

Ford Test Shows Correct Inflation of Balloon Tire

Every Pound Below Proper Pressure Costs 700 Miles of Service

DETROIT, April 12.—Under-inflation of a balloon tire costs the owner just 700 miles of service per pound under the correct pressure, according to the results of a series of experiments by the Ford Motor Company. These experiments were conducted in connection with a campaign to help Ford car owners get the most out of their tires.

To determine at just which point the Ford size balloon tires—29x4.40—yielded the maximum comfort to passengers consistent with maximum mileage, all makes of tires were tested. At the end of the test period, the exact loss per pound of under-inflation was calculated in terms of mileage and a bulletin was sent to Ford dealers and service stations advising the correct pressures.

A number of common tire ailments were traced directly back to under-inflation. Among the most common are rim cuts, tread separation, over-heating and stone bruising in addition to a more rapid rate of natural wear and deterioration.

On the other hand, every pound of over-inflation takes its toll of comfort and the fundamental value of balloon equipment is lost. Other advantages of low pressure tires, namely greater traction, ability to travel over soft ground without sinking and quick stopping without skidding, are also nullified in a direct ratio to the extent of the excessive air pressure.

The following inflation table has been proven to best combine riding comfort with long life in 29x4.40 balloon tires:

Type	Pounds Inflation	
	Front	Rear
Roadster	27	27
Coupe	27	27
Touring Car	27	27
Tudor	27	30
Fordor	27	30
Runabout with pick-up body	27	30

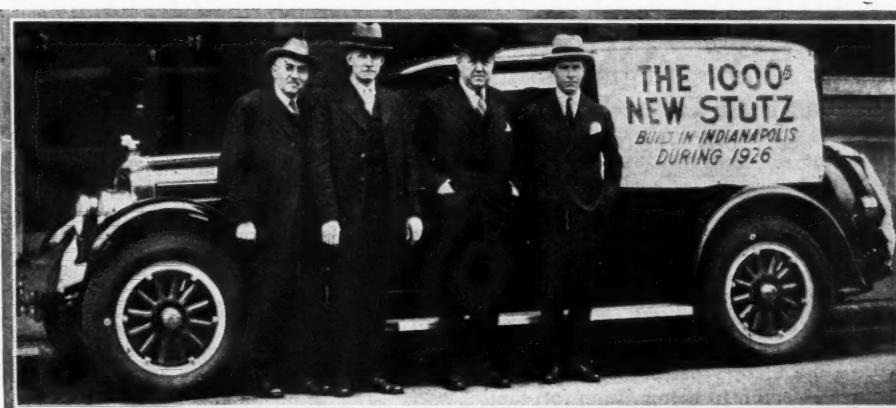
AC Building New Unit

FLINT, Mich., April 12.—Ground has been broken for an additional factory unit for the AC Spark Plug Company. The building will be 72x252, one story in height, of reinforced concrete construction. On completion of the new unit the company will have a total floor area of over 12 acres, 4 acres of which were added in 1925, to take care of its rapidly expanding business.

Takes Peerless in Iowa

SIOUX CITY, Ia., April 12.—The Shoberg Motor Company has been named distributor for the Peerless automobile. It is the first time the Peerless has been directly represented in this territory in years and the entire Shoberg building

STUTZ BUILDS 527 IN MARCH



Group of Stutz officials standing before the 1,000th car built since introduction. President Moskovics and E. S. Gorrell are at the right.

will be utilized for Peerless sales and owners' service.

"Facts and Figures" Ready Soon

NEW YORK, April 12.—The new edition of "Facts and Figures of the Automobile Industry," issued annually by the National Automobile Chamber of Commerce, is now in process of completion and is scheduled to appear on May 1.

New Oakland Dealers

PONTIAC, April 12.—The Oakland Motor Car Company signed the following new dealers during the month of February:

Superior Garage Co., Perth Amboy, N. J.; C. Gustafson & Son, Thief River Falls, Minn.; Soo Motor Inn, Minneapolis; Auto Supply Store, Montevideo, Minn.; Dorchester Wickes Motor Co., Dorchester, Mass.; Putnam & Sukek, Hyde Park, Mass.; E. J. Olson, Boyne City, Mich.; Hudgens-Schmidt Motor Co., Salina, Kas.; Carrington Oil Company, Carrington, N. D.; Hall & Morris, Elizabeth, Pa.; Nahauer Garage, Albany, Minn.; Claremont Auto Company, Claremont, S. D.; Anderson Brothers, Alvarado, Minn.; Standard Garage, Montpelier, Ohio; A. E. Kvam, Glenwood, Minn.; Kelley Motor Co., Buckhannon, W. Va.; Wilcox & Chesley, Mankato, Minn.

Hunsaker Motor Sales, Fairmont, W. Va.; W. E. Stone, Tulare, Calif.; Brandstater Motor Sales, Nashville, Mich.; Sands Motor Co., Cleveland, Ohio; N. C. Wattenberg, Saginaw, Mich.; Wahl Sales, Saginaw, Mich.; Horns Garage, Bicknell, Ind.; Goddard Motor Sales, Lawrenceville, Ill.; Monoque & Young, Milton Junction, Wis.; Baldwin Motor Co., Fairhope, Ala.; Burke Motor Co., Tuscola, Tex.; Rochester Motor Sales, Rochester, Mich.; Bost & Weeks, Napoleon, Ohio; Bahls Bros., Cottage Grove, Minn.; L. C. Graff & Co., Fremont, Mich.; The Auto Shop, Farmington, Mich.; Brighton Motor Sales, Brighton, Mich.; Reagan Motors, Minden, La.; Geo. D. Huebler, Ypsilanti, Mich.; Sotham Motor Co., Cumberland, Iowa; W. C. White Co., Chelsea, Mich.

New Reo Models

LANSING, April 12.—New models of its speedwagon trucks have been brought out by Reo Motor Car Co. to supersede the present 1½-ton and 2-ton models.

Gorrell Reports Orders on Hand Now Total 2,414 for Immediate Shipment

INDIANAPOLIS, April 12.—Edgar S. Gorrell, vice-president of the Stutz Motor Car Company of America, in his statement to the board of directors at the close of March business, reported the company had on hand unfilled orders to the value of over \$7,250,000, represented by 2,414 orders for new automobiles to be shipped immediately. All orders are for standard production with no specifications to hold up shipments.

During March, according to Mr. Gorrell, the company shipped 527 cars, total sales for the month exceeding \$1,500,000 in value. These shipments break all records in the entire history of the Stutz factory, the largest previous shipments dating back to June, 1920.

During each of the months of January, February and March of this year the volume of cars shipped has been greater than it was thought possible to build in that limited time. Total shipments, since the first presentation of the new Stutz Safety Chassis in January exceed 1,000 cars.

During March, new dealer contracts were signed in 94 important cities. As soon as production can be increased the company will be justified in adding more dealers to the distributive organization. Many prospective dealers are merely waiting the company's statement that they can supply them with cars, to take on the line.

Takes Auburn Distribution

KOKOMO, Ind., April 12.—The Carl C. Eikenberry Co. of Russiaville, Ind., has taken the agency for Auburn cars. This company has been connected with the Auburn Automobile company since it manufactured buggies. In addition to the Auburn line, Mr. Eikenberry handles Star cars.

Auburn Sales in First Quarter Are 3,392 Cars

January Alone Registers as Many as Full Three Months a Year Ago

AUBURN, Ind., April 12.—E. L. Cord, president of the Auburn Automobile Company, announces that sales for the first quarter totaled 3,392 cars as compared to 839 cars in the first quarter of last year, an increase of 40 per cent. January, with 838 cars, was the largest month in the history of the company, the next largest month being June of last year with 824 cars.

In February, 1926, sales mounted to 1,066 cars, surpassing January by 228. March sales amounted to 1,492 cars.

Stocks of cars in dealers' hands April 1 represent less than 15 days' business. Many dealers have more retail orders on hand than the total cars in stock.

Export business for march amounted to 152 cars as compared to 42 cars in 1925, the first quarter's export business being 268 cars as compared to 84 in 1925.

The company has not only widened its distribution but many localities have already absorbed more Auburn cars in the first three months than they did in the entire year of 1925.

The actual registrations of all cars in Chicago and Cook county, for February and March of 1925, showed 33 companies delivering a greater number of cars than Auburn; February and March of this year showed only 13 companies delivering as many cars as Auburn in this territory.

Super-sports Being Built

DETROIT, April 12.—Production has commenced at the Rickenbacker Motor Co. on the super-sport streamline sedan which made its debut at the New York automobile show. The first of these models are now coming through and in a short while one a day will be produced. While the chassis is basically the same as the standard "eight" model a number of modifications are necessary and delays in receiving certain special parts have held up manufacture of the new model.

Ford Credit in Germany

BERLIN, March 25.—(By Mail.)—The Ford Credit Co. has been organized here with a paid-up capital of 2,000,000 Reichsmark, for financing the Ford Motor Co.'s credit sales in Germany. The organizer of this new Ford enterprise is not the Detroit parent company, but the recently formed Berlin Ford Motor Co. jointly with representatives of the Danish Ford branch. The board of directors consists of Messrs. Heine, Posekel and Government Councillor Ueberall. Mr. Byrns (Berlin) is president. With this organization is ushered in the financing of German purchases of Ford cars.

NEW Automotive Literature

SELL CARS—NOT TERMS. The 1925 Year Book of the National Automobile Dealers' Association. This book contains all the addresses made by speakers at the Ninth Annual Convention of the N. A. D. A. at Chicago in February of this year. It also gives information about the activities of the N. A. D. A. Published by the National Automobile Dealers' Association, 320 North Grand Ave., St. Louis, Mo.

CURTIS AIRMIST CAR WASH SYSTEM. A booklet discussing car washing in general and the Curtis system in particular, with many illustrations. Published and distributed free by the Curtis Pneumatic Machinery Co., St. Louis, Mo.

GOODELL-PRATT CATALOG NO. 16. This new catalog lists all the tools manufactured by the Goodell-Pratt Company. It contains 400 pages and is profusely illustrated and a good deal of space is given to describing and listing the uses of various tools. Thirty-nine new tools added to the line are indexed in the front of the book. Issued by the Goodell-Pratt Company, Greenfield, Mass.

Darracqs Win Opening Race on Miramas Track

PARIS, March 30.—(By Mail.)—The 91½-inch supercharged Darracqs, driven by Major H. O. F. Segrave and Georges Moriceau, won the first two places in the opening race of the season on Miramas track, near Marseilles, for the Hartford cup. Segrave averaged 81.8 miles an hour for a distance of 158.6 miles, and Moriceau finished 49 seconds behind him. These two-year-old racing cars never have been beaten in any race in which they have taken part.

The Hartford cup race consisted of elimination heats for the different classes, over a distance of 30 miles, followed by a final, open to all who had qualified. The three-mile track has practically no banking, and to further equalize chances a short U was inserted in the track, so as to oblige competitors to slow down and go through the full range of gears every lap.

All the competition lay between the Darracqs and the 122-inch Bugattis, which finished third, fourth and fifth. Of the 16 starters only six went the full distance. By reason of the loop and the small amount of banking the track proved particularly destructive of tires.

Lewis Joins Flint

FLINT, Mich., April 12.—R. H. Mulch, vice-president and general manager of the Flint Motor Company, announces the appointment of Otto E. Lewis as regional manager in the Boston territory. He will make his headquarters in Boston. Mr. Lewis is a veteran of the industry and has been for many years associated with other well known companies.

Erskine Believes General Outlook in 1926 Is Good

Production and Sales in First Quarter Ahead of Same 1925 Period

SOUTH BEND, Ind., April 12.—A. R. Erskine, president of the Studebaker Corp. of America, regards the general outlook for the automotive industry as good although deliveries have been held up by cold weather, especially in the Great Lakes section, and there has been some accumulation of dealers' car stocks.

At the annual Studebaker meeting he said that the corporation's production in the first quarter this year was about 33,000, against retail sales of about 30,000 cars and comparing with 29,937 shipped in the 1925 quarter.

He expects first quarter profits to be substantially the same as the \$3,605,780 profits in the first quarter last year. This was equal to \$1.84 per share on 1,975,000 common shares. Since the end of last year the number of stockholders has increased from 14,000 to 17,000.

Increased sales are expected in the second quarter, with some prospect that they will equal the 40,000 of the 1925 quarter. Factory deliveries the latter part of March increased 50 per cent over those for the early part of the month.

Would Raise Gas Tax

SAN FRANCISCO, April 12.—An increase of the state gasoline tax to 3 cents a gallon from the present rate of 2 cents is to be sought by initiative petition on the November ballot in California by the California State Automobile Association. Directors of this association by unanimous vote decided to lead the movement which will raise \$10,000,000 a year for 12 years to meet the \$123,000,000 highway building program of the state. This method will pay for highways as they are built and leave no burden of debt for the next generation. Though automobile dealer associations and trade organizations generally have taken no official steps, officials of these organizations say they approve the increased gasoline tax plan as it will stabilize highway construction and improve motoring conditions through the state.

Peerless Plans Sport Cars

CLEVELAND, April 12.—Peerless Motor Car Co. will get into production in the near future on two new sport models on its 72 line. The new models will be a sport roadster and sport sedan, designed according to C. A. Tucker, general sales manager, to meet a special demand for cars of this character coming from the South particularly but also from all parts of the country. The roadster will have a rumble seat and a compartment in the side for golf clubs.

Mail Cost Reduced by Truck Use, U. S. Is Told

Newspaper Publisher Says the Expense Is Cut More Than Half by Hauling

WASHINGTON, April 12.—An enormous saving on newspapers and magazines throughout the country can be saved by publishers through distribution of papers by use of motor trucks. This was urged on Congress this week by J. Barnum, publisher of the Syracuse (N. Y.) Post-Standard, chairman of the postal committee of the American Newspaper Publishers' Association, testifying in the interest of lower postal rates.

Figures given by him to the special joint Congressional postal subcommittee showed that his paper each week shipped from Syracuse to Ithaca, a distance of 60 miles, a total of 13,700 pounds of papers. The postal rates would have been \$232.90, compared with the trucking cost of \$70, or a saving of \$162.90 per week to his paper, he told the committee.

Members of the committee were told that because of the high postal rates that publishers are being forced into handling their product by motor trucks, with a resultant saving of thousands of dollars each month.

Elisha Hanson, legal representative of the publishers, cited figures showing that there are now available a total of 241,000 miles of hard surface roads for trucking purposes, as compared with a total railway mileage of 250,000 miles. As a possible solution Hanson urged that the government itself should establish motor truck routes to handle the bulk mails.

"The government certainly should avail itself of the facilities thus offered by the 241,000 miles of hard surfaced road built in the U. S. since 1920, at a cost of some \$560,000,000," he told the committee.

New Fageol Branches

SAN FRANCISCO, April 12.—The Fageol Motors Company, of California, recently merged with the American Car & Foundry Company through the newly-formed American Car & Foundry Company, has opened direct factory branches at 1675 Mission street, San Francisco, and Twelfth street and Eighth avenue, Oakland. W. A. Knucky is in charge at San Francisco, and T. L. Baumgartner at Oakland. A large part of the parts stock held at the Fageol factory in Oakland will be transferred at once to the two factory branches, according to J. H. Fort, general sales-manager of the Fageol plant. Butler-Veitch, Inc., of San Francisco, has acted as distributors of Fageol trucks for northern California for the past nine years.

Begins Building Planes

DETROIT, April 12.—Six new commercial airplanes are under construction at the factory of the Hess Aircraft Co., just

JORDAN BELIEVES DANGER OF OVER-PRODUCTION PAST

CLEVELAND, April 10.—All danger of overproduction of automobiles this year has passed, is the belief of Edward S. Jordan, president of the Jordan Motor Car Co. Mr. Jordan credits the recent reaction in the stock market with having checked production plans that appeared to be too expansive. In a statement sent to all his dealers Mr. Jordan says:

"For a time it looked as if some of the manufacturers were going to forget their experience of the past.

"Fortunately the men who buy and sell in Wall Street had bulled the market to a point where it could not possibly do anything else but react severely and they started to sell short just as the manufacturers of automobiles were leading up into excess production.

"When the short selling was started in Wall Street, the people who had made money buying the stocks started to make money on the short side.

"This publicity, spreading through the country, affected millions of people, with the result that automobile manufacturers who were threatening to over-produce curtailed their schedules and brought their outputs down to a reasonable basis.

"Today there is no excess of motor cars in stock anywhere in the country. Outputs are reduced and during the next 30 days with the spring weather just around the corner, it will become apparent that the demand for automobiles is highly satisfactory.

"Speaking of the stock market, upon which all the publicity has been based, isn't it reasonable to expect that any influence which this publicity may have, will exert only a very satisfactory effect upon general business?

"If inflation in securities had continued as it started, we undoubtedly would have had a similar inflation in commodities before the end of this year, with results, from the standpoint of general business, which might have been very unsatisfactory.

"The reaction which has taken place during the last few weeks in the stock market apparently has had a very healthy effect on manufacturers generally in all lines, with the result that inventories will be watched carefully, production kept in steady step with sales and the danger of over-production avoided in all lines.

"General business conditions fundamentally are very satisfactory—even more so than they were at this time last year. Check the sales of leading manufacturers against the same period of last year and you will immediately get the point. The same might be said of almost any line of general business.

"Jordan sales volume in dollars and cents in the six months period ending March 31, this year, exceeded sales of the same period a year ago by 75 per cent. Retail sales have shown a steady increase each week for the last ten weeks.

"The great thing about the automobile business and the thing that makes it fundamentally sound and the demand constant, is the fact that while one man may delay buying a car for a month, no man ever stops using his car."

established in this city, it is announced today by A. Hess, president and chief engineer. This marks the third commercial airplane manufacturer to go into production on a new type of private airplane here since January 1. Deliveries of the first batch of six machines will be completed by the end of April and orders are on the company books for 33 planes to be built by June 1. The airplanes are of the conventional biplane form powered with Curtiss OX-5 of 90 h.p. and capable of carrying three passengers in addition to the pilot.

Crude Production Up

NEW YORK, April 12.—The American Petroleum Institute estimates daily average gross crude oil production in the United States as 1,947,450 for the week ended April 3, an increase of 13,650 barrels over the preceding week. Receipts

of California oil at Atlantic and Gulf Coast ports increased from 2,668,000 to 2,848,000 barrels. Imports of petroleum, crude and refined oils, at principal ports totaled 7,826,000 barrels in March against 5,785,000 in February. For the week ending April 3 imports were 1,181,000 barrels compared with 2,367,000 in the preceding week.

Lefebvre Heads G. M., Ltd.

DETROIT, April 12.—Gordon Lefebvre has been appointed general manager of General Motors of Canada, Ltd., succeeding K. T. Keller, who resigned to become affiliated with the Chrysler Corporation. In assuming the new position Mr. Lefebvre said conditions in Canada were unusually good and all Canadian plants of General Motors are at capacity and looking forward to favorable conditions for the balance of the year.

U. S. Will Refund About \$3,000,000 in Car Taxes

Sum Represents Difference Between Old 5 and New 2 Per Cent Excise

WASHINGTON, April 12.—A total of approximately \$3,000,000 will be refunded to automobile manufacturers by the treasury in the readjustment of the new automotive excise taxes, which in turn will be adjusted by the manufacturer with his agents and dealers.

This sum represents the difference between the old 5 per cent tax and the new 2 per cent tax on passenger cars, which became effective on March 29, and which the government agreed to rebate on all cars in the hands of the dealers and agents on March 29.

An appropriation of \$1,000,000 in money was asked by President Coolidge this week, in a letter to Congress, which estimated that a total of about \$3,000,000 would be required to rebate the retroactive tax. Of the total sum needed, \$2,000,000 will be adjusted through credits taken by the automobile manufacturers on their monthly tax returns for the month of March.

No figure is given as to the number of passenger cars in stock on March 29, when the reduction became effective to the public, but their value is estimated by the Treasury Department to be roughly \$100,000,000.

Association Sells Used Cars

KALAMAZOO, Mich., April 12.—The Motor Midway, property of the Kalamazoo Automobile Trade Association, has opened in West Main street under the management of Harold Sharpsteen, for the past two years automobile editor of the Kalamazoo Gazette. The property is devoted exclusively to the sale of second hand cars and has accommodations for 200 at one setting. Among the conveniences is a central sales office. The entire area is brilliantly lighted. Sales since the opening have been surprisingly good, despite unfavorable weather.

Marmon Head on Tour

INDIANAPOLIS, April 12.—G. M. Williams, president of the Marmon Motor Car Company, has left Indianapolis for an extended trip through the west where he will confer with Marmon dealers and business executives. His route will take him to Los Angeles, San Francisco, Portland, Seattle, Spokane, Billings, Mont., Denver, Chicago. This is Mr. Williams' second journey to the Pacific coast since he assumed the presidency of the Indianapolis factory, and is in keeping with his policy to obtain first hand information of business conditions throughout the country. His first stop will be at Los Angeles, where he will visit the Pelton Motor Company, Marmon distributors.

Takes Star Distribution

BOSTON, April 12.—The Central Star Automobile Company has just been incorporated here and it has purchased the franchise of the Durant Star Boston branch to merchandise the Star line in Metropolitan Boston. George F. Day, for some years general supervisor of retail stores throughout the country for Durant Motors, Inc., is general manager and Alfred H. Sowers, former distributor of the Jackson and Lexington lines in Boston, and later handling the Chrysler and Star in Lynn, is president.

Organizes Two Firms

MILWAUKEE, April 12.—Fred Boddenhagen, Jr., one of the original partners in the Northwestern Motor Car Co., a principal Ford dealer in the Milwaukee district, who recently retired, has organized two new concerns. The Northern Motor Sales, Inc., has been appointed distributor of the Marmon in Wisconsin and upper Michigan, and will occupy 100x140 feet in the new Coakley Bros. storage warehouse at Prospect and North Avenues. Fred Boddenhagen, Inc., has been appointed Milwaukee county dealer for the Star, and is building a new sales and service building, 100x150 ft., at North Avenue and Eighteenth Street. Temporarily, both concerns have offices at 778 Twentieth Street.

New Mack Branch

MILWAUKEE, April 12.—Contracts have been awarded for the new Milwaukee territorial branch sales and service headquarters of the Mack International Motor Truck Corp., which will represent an investment upwards of \$225,000. It will be situated on Grand Avenue, at Highway Place, and will be 200x425 ft., part two stories and basement, of fireproof construction. The Milwaukee Mack branch at present occupies leased quarters at 439 Prospect Avenue.

Oakland-Pontiac Output 12,035 Cars in March

PONTIAC, Mich., April 12.—The strides made by the Oakland Motor Car company were revealed this week when total production figures for March showed that more cars were built during this one month than during the entire first four months of last year.

A record-breaking total of 12,035 Oakland Six and Pontiac Six cars was manufactured and shipped out. Another factory record was smashed on March 31 when 750 cars were shipped to dealers—the greatest one day shipment in the history of the company.

These achievements were made possible, in great measure, by the phenomenal sales of the new Pontiac Six which was introduced the first of the year as a companion car to the Oakland Six. More than 10,000 Pontiac Sixes were produced and sold during the first three months of this year. Pontiac Sixes are now being built at the rate of 300 a day.

Creditors Make Plans to Reorganize Murray Body

New Financial System Would Provide for Retirement of Most of Claims

DETROIT, April 12.—Tentative plans of reorganization of the Murray Body Corporation was decided at a recent meeting of the creditors of the company. The plans call for the issuance of \$3,086,000 new 7 per cent preferred stock and \$2,796,900 ordinary preferred and increasing common shares outstanding to 692,264 no par shares. This plan will provide \$4,000,000 in cash.

The new 7 per cent preferred will go to retire \$1,000,000 purchase money claim of the Hupp Motor Company, \$500,000 in loans by individuals and take up 25 per cent of the banks' claims and 60 per cent of the creditors' claims. Cash will go to pay remaining unsecured claims, 40 per cent of merchandise claims and 50 per cent of bank debt, the remaining 25 per cent of bank debt to be liquidated by issue of common stock on a basis of \$10 a share.

At the meeting William Robert Wilson, president of the Guardian Trust Company, receiver for the bank, outlined the progress of the receivership since December 4, 1925. He said that 9,000 bodies were shipped in December, 10,800 in January, 13,000 in February and 14,000 in March. The April schedule will be greater than March.

Receiver's examination warrants a write-off of about \$380,000 on inventory and \$150,000 on receivables. Tax claim set up by the government affecting taxes of the former Wilson Body Company for years 1917 to 1921 has been covered by a reserve of \$425,000 Mr. Wilson said.

Harger Joins Willys

TOLEDO, April 12.—From Willys-Overland officials comes the announcement that Rollin N. Harger, for several years in charge of all operations in the British Isles for Dodge Brothers, Inc., has assumed connection with the sales department of Willys-Overland, Inc. While still at the Willys-Overland factory, Mr. Harger will shortly return to England in connection with sales work between the domestic organization of Willys-Overland, Inc., and Willys-Overland-Crossley, Ltd., the British manufacturing plant of the company which serves all of continental Europe and other territories.

Opens Used Car Addition

WORCESTER, Mass., April 12.—The Hayden Motor Company, distributor of Paige and Jewett, has leased the store adjoining its salesrooms and has turned it into a used car department in charge of Daniel H. McCall, who formerly had been manager for the Donahue Motor Company and the Worcester Flint Company.

Nash-Ajax Income First Quarter Is \$4,137,508

Net After All Expense Compares With \$3,099,292 for Same Period Last Year

KENOSHA, Wis., April 12.—The Nash Motors Company reported that for the first quarter of its 1926 fiscal year, covering the three months ending February 28, 1926, after deducting expense of manufacturing, including depreciation, selling, and administration, and providing for local taxes, and state and federal income taxes, the net consolidated income for the Nash Motors Company and its subsidiary, the Ajax Motors Company, amounted to \$4,137,508.16, as compared to \$3,099,292.92 for the same period a year ago.

In commenting on the condition of the Nash and Ajax Companies and the business outlook, President C. W. Nash said, "We regard the earning record of the initial quarter as very satisfactory although it is a fact that we were unable to manufacture all the cars for which we had orders due to changes made in design and certain physical rearrangements in the plants.

"At no time in our history has our product been held in higher esteem by buyers and the demand is continuing to tax our production resources despite increased manufacturing facilities.

"Reports on retail deliveries of cars received during the last three weeks from our distributor points, including the major cities of the country, show that they were the biggest three weeks in consecutive order we have ever had since the company was founded.

"At the same time during these three weeks the sales of used cars at these points were the largest ever achieved in our history, and the stocks of used cars declined 20 per cent, providing additional proof that consumer buying is increasing rapidly."

Mail Contract Awarded

WASHINGTON, April 12.—The National Air Transport, Inc., of Chicago, was this week awarded the contract for carrying the mail from Chicago to Fort Worth and Dallas, via Moline, Ill., St. Joseph, Kansas City and Oklahoma City. The contract calls for 80 per cent of the revenue derived. The route is 987 miles long.

Creates New Department

TRENTON, N. J., April 12.—The New Jersey legislature, which recently adjourned, passed a law creating an independent department of motor vehicles. In the past this department has been a division of the office of the secretary of state and the commissioner has been named by the secretary of state. Under the new law the commissioner is named by the legislature. Another new law places all buses under the jurisdiction

of the public utility commission. Heretofore the state has had no authority over buses operating in interstate commerce. Two other new laws make more direct and drastic legal procedure against automobile operation by drunken drivers. First offenders may be fined \$250 or sent to jail. For subsequent offences a jail sentence is mandatory. The width of automobiles is limited to 96 inches by another law, but the bill for a two-cent gasoline tax was defeated.

Bullock Speaks in Moline

MOLINE, Ill., April 12.—More than 200 automobile dealers and their salesmen assembled at the Rock Island Y. M. C. A. rooms to hear an address by H. D. Bullock, executive of the National Automobile Dealers' Association upon the subject of conditions in the industry. His talk covered a wide range of finance and management, sales and salesmen, and used cars and dealers' profits. He predicted a record breaking year, basing his belief on factory production, advance orders and general prosperity throughout the country. He gave the dealers and salesmen some sales tips, affecting both new and used cars and outlined many ideas of value in the effort to carry on a profitable business, and avoid losses. A banquet preceded the address.

Dealer Uses Installment System in Battery Sales

AKRON, April 12.—The Maibohm Battery Ignition Co. has instituted an installment selling plan that is increasing battery sales as well as the profits, officials of the company claim. The company has had a large volume in the past. Now, with the installment plan, it is fast doubling total sales.

Mr. Maibohm declares that the idea was conceived merely because of the number of customers who evidently wanted a battery but hung back when the matter of cash was mentioned. Today this company merely asks "How much money can you pay down?" and whatever the customer is willing to pay is accepted.

The new battery is not installed on the man's car, however, but a used one is put in its place, the customer being advised of this, of course. If the man pays \$5, a \$2.50 used battery is given him until he has paid in full for the Willard, when the new one is installed. In other words, if the man leaves town with the battery, this concern is still ahead because the battery he is given is never quite worth the down payment.

Mr. Maibohm says that he has tried all other ways of credit selling but this is the only successful one that he has found as the mortgages and necessary red tape are done away with, and, while he believes that an interest charge of 10 per cent could easily be made with no complaint from his trade he has found it unnecessary.

Moskovics Tells Buffalo What Motor Has Done

Address Before Chamber of Commerce Explains Related Development

BUFFALO, April 12.—What the motor car has done for America, was discussed by Frederick E. Moskovics, president of the Stutz Motor Car company, at a membership luncheon of the Chamber of Commerce here.

"The motor car industry," he said, "is the foremost industry in the value of manufactured products in the world. It uses one-eighth of all the copper consumed in the United States, 55 per cent of the plate glass, 68 per cent of the fine leather for upholstering and 85 per cent of all the rubber.

Nine and one-half per cent of all the labor employed in America is employed by the automobile industry or its related products. It is tied up very closely with the economic and financial welfare of the country to a very great degree and the welfare of the country is largely dependent on its prosperity.

"The psychological effect of the automobile has been very beneficial to America. The educational and trading range has been lengthened from four miles to 70 miles. The little red school house with its limited facilities has disappeared and in its place are large schools with all modern equipment caring for the children for many miles.

"The small crossroads store has disappeared and in its place the people are going many miles to do their trading at modern up-to-date mercantile establishments. It has brought about a revolution in education and trading.

"It has brought a solidity to the people of the entire United States. Henry Ford with his car has done more to wipe out the Mason-Dixon line than the Civil War. It has prevented the formation of any peasant class in America."

Mr. Moskovics traced the development of civilization with the development of means of transportation, saying that the automobile has made the United States "the intellectual leader of the world." He declared that the men in industry were keenly aware of their responsibility to the public and that they were at all times devoting their best efforts to produce better, more comfortable and cheaper transportation.

Big Profit Is Shown

LOS ANGELES, April 12.—Completion of a highly successful year through substantial increases in net profits and surplus is reported in the annual statement of the Goodyear Tire & Rubber Company of California. Net earnings in 1925, after all charges, totaled \$3,686,578, an increase of 92 per cent over 1924, and the equivalent of \$46.11 a share on the outstanding preferred stock. This is comparable to earnings of \$23.96 in 1924.

A.E.A. Speakers Confer With Texas Garagemen

Problems and Methods of Jobbers and Dealers in Cars and Accessories Discussed

DALLAS, Tex., April 12.—Automotive jobbers, dealers and garagemen in all sections of Texas have been attending conferences and hearing discussions of better sales methods and service arrangements during the last fortnight. The conferences at which problems of the jobbers, dealers and garagemen were discussed were parts of the Automotive Equipment Association's educational campaign and were arranged by automotive jobbers in various distributing centers, co-operating with the different chambers of commerce.

In Texas "auto clinics" were held at San Antonio, Corpus Christi, Houston, Waco, Dallas, Fort Worth, Abilene and Wichita Falls. At San Antonio some 700 salesmen, jobbers, dealers and garagemen in the San Antonio territory attended a two days' "clinic." At Corpus Christi some 200 were at a one day meeting. At Houston some 450 attended the conference and some 550 were at the Waco meeting. At Dallas approximately 1,000 were in for a two days' session and at Fort Worth some 400 heard the discussions. Some 350 were in attendance at Abilene and the same number at Wichita Falls.

Arthur R. Mogge, merchandising director of the Automotive Equipment Association; M. D. Graham of the A. E. A., and Walter Hecker of St. Louis were the chief speakers at the conferences.

Throughout Texas these speakers advised the dealers to handle more of the standard brands of equipment, parts and accessories and less of the "fluke" articles being offered as cures for all automobile ills. They said in the long run the equipment and accessories of proven worth are the cheapest and the dealers and garagemen owe their customers the duty of assisting them in maintaining their machines at the minimum cost and the highest efficiency, and to protect them against the use of worthless articles sold by "fly-by-night agents" who were interested in big profits and not the customer's automobile.

The speakers, in discussing new service methods, said the time has arrived when the garagemen's chief duty is to prevent repairs rather than make them. They said there would always be plenty of repair work for the man equipped to do it right, because there will always be motorists who "take a chance" and wind up in a smashup.

But they maintained a good deal of the repair work could be prevented by minor adjustments at proper time and by frequent greasing, oiling, etc. Frequent and thorough inspections, replacing worn parts with new ones, frequent greasings and oilings, will prolong the life of au-

tomobiles and keep shops running, the experts said, and means profit to the garagemen.

Accessories were discussed from four angles, safety, comfort, convenience and appearance—all essential on the modern automobile. The speakers told the dealers how best to make sales of these articles.

The dealers and garagemen were warned that women are now doing a great part of the driving. This meant accessories of all four classes and repair work which stands the test. "Please the woman and you have the work," was the admonition given the dealers and garagemen.

At each conference the jobbing houses had their salesmen in for some special sales talks. Some of these discussions were illustrated by moving pictures, as were some of the discussions on shop work in connection with the use of labor saving equipment.

The jobbers believe the conferences in Texas will result in increased sales of equipment and accessories immediately. At these conferences where it was shown that money spent for modern equipment is well spent if that equipment aids in turning out a better job for a customer in a shorter time, many of the garagemen said they would install some modern shop equipment immediately. Many dealers announced they would get to pushing accessories along the lines indicated as necessary for best results in the discussions by experts.

Chrysler Dealers Meet

CHARLOTTE, N. C., April 12.—Approximately 60 Chrysler dealers from 40 counties attended a conference here, as guests of W. T. Hoppe, of Hoppe Motors Company, Chrysler distributor, when Stewart W. Monroe, director of sales for the Chrysler Corporation of Detroit, delivered an address. C. E. Beloate, of Atlanta, district sales supervisor, also attended this conference.

Buick Branch Sets Record

NEW YORK, April 12.—The New York branch of the Buick Motor Co. delivered 3,187 new Buicks in March. This is a new high record for this branch. The largest previous delivery month was April, 1923, when 3,064 cars were delivered. Branch officials believe that 3,187 is the largest number of new cars ever delivered through any New York house or distributor in a single month.

Wichita Falls Plans Show

WICHITA FALLS, Tex., April 12.—The automobile dealers of this city are working out plans for their annual spring show. The dates for the exhibition have not been set, but it was said the show would be held this month. The committee in charge said all new models would be on exhibition and that the accessory, tire and truck and bus men would be asked to join with the automobile dealers in making the show the biggest ever staged here.

Stearns Begins Period Of Greater Prosperity

Expansion and Improvement Shows Results Since Acquisition by Willys

CLEVELAND, April 12.—More than \$500,000 has been expended in plant equipment, new machinery and general improvements, the dealer representation has been increased and a new sales policy has been started in Cleveland during the three months that have passed since John N. Willys and associates took control of the F. B. Stearns Co. in this city.

It has been definitely established that the F. B. Stearns Co. will remain a Cleveland institution and continue to manufacture passenger cars. There is no consolidation and none is contemplated. There is a definite design to increase production and raise the quality of service. With this in view, F. T. Larson, formerly connected with the sales departments of Hudson and Chrysler companies, has been made sales manager.

The correlation of improved engineering design and production methods has brought John T. Trumble as chief engineer and designer at the factory. He formerly was connected in an engineering capacity with the General Motors Corp. O. T. Lawson, who has had years of experience with automotive companies, has been made manager of production and purchases.

Hereafter sales and service will be concentrated in Cleveland on one company. James B. Hamby has been brought from Chicago to become sales manager of the local territory. For four years Hamby served under H. J. Leonard, new president of the Stearns company, and during the last two years he was connected with the Chrysler Corp.

The Stearns Co. has been flooded with orders since the new models were displayed at the shows. The first three months of the present year will show an increase in sales of 80 per cent over the same period last year. During the Boston show the Stearns dealer sold more cars than during any previous show held there.

Wilson Making Radios

MOLINE, Ill., April 12.—A five-tube radio set is being manufactured by the E. H. Wilson Manufacturing company. Extensive production will be undertaken during July and August, it is stated. Fifty of the new sets have been distributed to principal dealers throughout the country. F. L. Bradfield, former general manager of the Velie Motors corporation will direct sales. The Wilson company is principally engaged in the manufacture of automobile bodies. At its No. 3 plant in East Moline, however, it is producing automobile starting and storage batteries, wet radio A and B batteries, railroad storage and railroad primary batteries and farm lighting systems.

Gasoline Tax Nets U. S. \$146,028,940 in 1925

Total Is Increase Over 1924 of
83 Per Cent and 4 1/2 Times
1923 Figure

WASHINGTON, April 12.—A total of \$146,028,940 in gasoline taxes was collected from the motor vehicle operators during 1925, according to figures just compiled and announced by the U. S. Department of Agriculture. The amount collected represents an increase over 1924 of 83 per cent and was four and a half times the tax collected in 1923.

Of the total tax collected, \$102,065,216 was made available for state highways, \$32,721,704 for county and local roads, \$217,393 for collection costs and \$11,024,627 for other purposes. But in four states, Illinois, Massachusetts, New Jersey, and New York is there no gas tax assessed.

The tax represents the revenue derived from the sale of 6,457,783,284 gallons of gasoline, the average rate of taxation being 2.26 cents per gallon. The average consumption per vehicle was about 430 gallons. In the 44 states in which the tax was levied, the average amount paid by the motor vehicle operator was \$9.52.

A. A. A. Cancels Laurel Dates

WASHINGTON, April 12.—Cancellation of the 1926 dates assigned to the Washington-Baltimore Speedway at Laurel, Maryland, is announced here by the contest board of the American Automobile Association. The action of the contest board was the result of the failure of the Laurel Speedway management to pay the balance of the money due to nine of the best known drivers of the country who participated in the race held at Laurel on October 25, 1925, it was explained by Ernest H. Smith, general manager of the A. A. A. Mr. Smith explained that the contest board has cancelled the dates, June 26 and October 9, 1926, set aside for Laurel, after the Speedway management has been given every reasonable opportunity to make good on the \$3,000 due to the drivers.

Bosch Radio Men Tour

SPRINGFIELD, Mass., April 12.—A. H. Bartsch, sales manager, and Leslie Curtis and William Cotter, engineers for the American Bosch Magneto Corp., have started on a 14 days' tour of the principal cities of the Eastern and Central States, testing out the company's new radio sets and accessories. Their route takes them as far as Des Moines and St. Louis. The new sets, which will not be produced in quantity until some weeks later, are being manufactured entirely in the Bosch establishment and are said to embody distinct advantages in respect to selectivity and amplification. While embodying the same general principles, they cover a price range that will minister to different classes of users.

Hold Sales Contest

NEW YORK, April 12.—Dodge Brothers salesmen in Manhattan, the Bronx and Westchester are participating in a sales contest whose winners will visit the factory in July. The winners will be the six salesmen having the highest percentage of sales above their monthly quotas from March 1 to June 30 in each of the districts mentioned. In addition \$100 is being divided each month among the leading salesmen in the team contests in each of the three divisions. In the monthly prize contests, salesmen are drawn for by team captains by an elimination process, selecting passenger car men first, commercial car men second, taxicab men third and used car men last. The team making the largest number of car deliveries, new and used, wins the right to split the prize money seven ways, from \$30 to \$5. The qualifying quota for each man is three deliveries and each man reaching his quota for the month draws for the money.

Business Growth Brings New Northwest Dealers

SPOKANE, Wash., April 12.—Increased demand for automobiles, brought about by better general business conditions and a tendency towards growth in the larger centers of the Inland Empire is resulting in a large number of new dealer organizations being placed by distributors in the smaller towns, some of which are erecting buildings of their own.

The Transport Motor company, Overland and Willys-Knight distributors, is opening a branch distributing and retail branch at Pendleton, with Archie Taylor in charge as the manager, and is planning the erection of a building at Pendleton.

The Miller-Johnson Motor company has been organized to handle the Oldsmobile line in Walla Walla with Jack Miller, recently with J. W. Leavitt in Los Angeles, in charge. August Johnson is interested in the firm with Mr. Miller.

The Tanner Motor Sales company of Kellogg, Idaho, is erecting a \$15,000 building for service and sales headquarters for the Nash and Ajax line.

Frank Parr of Pullman, Nash-Ajax dealer, will erect a \$12,000 brick building. Ernest V. Hughes has leased a salesroom and garage in St. Maries, Idaho, for handling the Nash-Ajax line.

Opens New Salesrooms

WORCESTER, Mass., April 12.—W. A. Mulry Company, recently appointed distributor here for the Studebaker line, has opened its new sales and service quarters at 218 Shrewsbury street. Several hundred visitors called to wish the members of the organization well and to inspect the place. The salesrooms were attractively decorated. The building contains about 25,000 square feet with convenient entrances front and rear. There is ample room for expansion.

Mogge Sees Texas as Big Automotive Market Again

A.E.A. Official Believes State Will Continue to Head List in Percentage of Gain

DALLAS, Tex., April 12.—Texas was not only one of the best automobile markets in the United States last year, and bids fair to prove the best this year, but the state is destined to be the best automotive market in the nation for years to come.

That is the opinion of Arthur R. Mogge, merchandising director of the Automotive Equipment Association, who has been visiting the chief cities of the state for the last several days.

"Texas was at the top of the list in percentage of increased automobile sales last year," Mr. Mogge said. "There is every indication that she will be at the top again this year, despite the great increase being shown in Florida. Despite all this 'no crop' talk we hear about over the nation when business in Texas is brought up for discussion, I have found the people here go right along buying automobiles. And I believe they will keep buying them for years."

Spring Business Good

HARTFORD, Conn., April 12.—Spring business is opening up with a rush, according to a canvass of the numerous distributors and dealers. Reports from various dealers suggest that never before have there been so many cars on the books calling for very early spring delivery. There is another angle to the situation which may be summed up in the words of one dealer: "I am car rich and money poor." All of which is quite to the point. If the majority of dealers were called upon at the present time to meet all their obligations they would be forced out of the field entirely. However, the next two or three weeks will make a big difference in their finances. All dealers are optimistic and look for a heavy selling season.

New Packard Building

BUFFALO, April 12.—The new home which the Packard company is building for the Packard Buffalo Motor Company, will prove a notable addition to the city's automobile row. The building will be completed by May 1. The property and building will represent an investment of \$400,000. The entire property is covered with a two-story building built in such a way as to accommodate a third story when the company may require it. The show rooms occupy a depth of 90 feet, being divided in the center, using one main entrance. The south side will be used entirely for new cars, while the north side will be used for used cars. At the rear of the show rooms is ample space to accommodate 12 salesmen's desks.

TRADE ASSOCIATION ACTIVITIES

PHILADELPHIA TRADES ELECT

Three Directors and Five Committee Members Named

PHILADELPHIA, April 12.—The annual meeting of the Philadelphia Automobile Trade Association was held yesterday. Vice-president Ralph W. Cook presided in the absence of President Jo. G. Roberts.

The following officers were elected: Directors for three-year term, Jo. G. Roberts, Ralph W. Cook and Harry B. Harper; members of admissions committee, F. J. Petersen, J. E. Gomery, Walter G. Herbert, Robert B. Parker and Jo. G. Roberts.

Reports of the various officers indicated the association had just completed the most prosperous year in its history. Membership gained 32 over the preceding year, according to Secretary Walter G. Herbert, now being made up of 43 active members, 42 dealers, 41 associate and 58 contributing members, a total of 184.

Treasurer J. E. Gomery reported the association in an exceptionally strong financial condition, and the annual show committee stated 85,000 attended the last Philadelphia automobile show, setting a new record for the event.

Hold "Aviation Night"

LOS ANGELES, April 12.—That the next few years will witness a substantial development in organized commercial aviation, as financed and managed by responsible business interests, was the declaration of Harris Hanshue, Major C. C. Mosley and J. G. Wooley, officers of the Western Air Express, Inc., in addresses delivered before the Los Angeles Automobile Trade Association at a recent "aviation night." The Western Air Express will shortly begin operations on its line between Los Angeles and Salt Lake City. Plans are already being made for the inauguration of other lines to give express and passenger service to other sections in the West. Hanshue, who is one of the pioneer automobile distributors of southern California, having recently left the motor car field to accept the presidency of the Western Air Express, expressed confidence that commercial aviation, when well-financed and properly managed, can be made a profitable and permanent business that will attract greater and greater patronage as the years go by.

Decatur Dealers Elect

DECATUR, Ill., April 12.—At the annual meeting of the Decatur Automobile Dealers' Association, officers were elected for the coming year as follows: President, W. C. Starr; vice-president, John F. Spiess; secretary-treasurer, A. W. Davis. After inactivity in the association affairs for the last year it was voted to meet regularly again. It is proposed to have a series of talks by national speakers who will discuss matters affecting the industry.

Prevent Liability Law

LOUISVILLE, April 12.—Compulsory liability insurance in a new form was prevented in Kentucky by the Louisville Automobile Dealers' Association and the Kentucky Automotive Trade Association when those organizations succeeded in defeating a bill presented in the 1926

session of the Kentucky Legislature and sponsored by the Louisville Automobile Club, which called for the granting of a of the person injured or whose property superior lien on an automobile in favor was damaged by that automobile. That motor car dealers and finance companies operating under such a law in order to protect their mortgage would have been forced to sell a liability insurance policy with each automobile or else assume the risk themselves, was the contention of the two trade organizations according to J. Garland Lea, secretary of the Louisville body. A state-wide campaign was conducted in opposition to that and other bills detrimental to the automobile industry of the state.

Traffic Men to Meet

NEW YORK, April 12.—The program of the 1926 annual meeting of the National Highway Traffic Association, which will be held April 30 at the Automobile Club of America here, shows the meeting divided into afternoon and evening sessions. The chairman of the afternoon session is David Beecroft, vice-president of the North Atlantic division of the association, and Arthur H. Blanchard, president, is chairman of the evening session.

Speakers at the afternoon session are R. H. Huffman, secretary of the motor vehicle conference committee of the National Automobile Chamber of Commerce; G. H. Pride, president of the Heavy Haulage Co., New York; Professor L. W. McIntyre, University of Pittsburgh; Harold M. Lewis, executive engineer of the regional plan of New York and its environs; P. L. Emerson, president of the Yellow Mfg. Sales Corp., Chicago, and Professor Blanchard.

Evening speakers are G. E. Hamlin, superintendent of repairs of Connecticut State Highway Dept.; E. P. Goodrich, consulting engineer, New York; Col. I. C. Moller, assistant director and traffic engineer, Commissioners of the District of Columbia; David Beecroft, vice-president, Chilton Class Journal Co.; C. F. Keale, chief engineer, Airmap Corp of America, New York, and D. C. Fenner, manager of public works department, International Motor Co., New York.

Welders Plan Programs

NEW YORK, April 12.—Sessions of the gas welding committee, S. W. Miller, chairman, and the electric arc welding committee, H. M. Hobart, chairman, will be held on the first day of the American Welding Society's annual meeting at the Engineering Societies Building here, April 21-23.

Sub-committees will report on materials for welding, welds subjected to high temperature, training of operators, and non-ferrous metals. Many additional tests have been made on specimens welded to determine the effect of current, electrode size, joint design and welding positions.

Dealers Are Organized

LONGVIEW, Wash., April 12.—The Cowlitz County Automobile Dealers' Association held an organization meeting with the following active committee in charge: Joe Goodfellow, S. J. Branscom and Harry Sparks of Kelso and Fred Hess and A. E. Pomeroy of Longview.

FORT WAYNE TRADES DINE

Annual Frolic Held With Burrus Principal Speaker

FORT WAYNE, Ind., April 12.—More than 800 men engaged in the automobile business in Fort Wayne and the surrounding territory attended the annual banquet and frolic of the Fort Wayne Automobile Trades Association at the new banquet hall of the Shrine Temple.

Distributors reserved sections at the various tables and had their dealers as guests. Employes of automobile dealers and the officials and employes of allied business concerns attended.

W. B. Burrus of St. Louis, sales consultant of the National Automobile Dealers' Association, was the principal speaker, speaking on "How to Make Money." In the course of his talk he suggested methods by which automobile dealers and salesmen can increase their incomes and learn to like their work.

A. L. Randall presided as toastmaster. Dealers and distributors represented at the banquet, who are members of the association, are the Schiefer Automobile Company, the Prague Motor Car Company, the Fort Wayne Overland Company, the Shyrock Automobile Company, the Hanke Motor Car Company, the C. L. Bornschein Motor Sales Company, the Standard Automobile Company, the Northern Indiana Motor Car Company, the Poinsette Automobile Company, the C. B. Hayner Motor Company, O. L. Kraus, C. H. Lines, the Greiger Brothers Chevrolet Sales Company, the Motor Sales Company, the Fitch-Potts Motor Car Company, the Moss-Roberts Motor Company, the Markay Motor Company, Chester G. Schiefer, L. E. Bowman, Connell Means Motor Company, Goral Motor Sales Company, Decker Motor Car Company, Anthony Wayne Motor Company, Majestic Motor Company and the Randall Brokerage Company.

Service Men Elect Miller

ST. LOUIS, April 12.—W. G. Miller of the Stewart Warner Service Corp., was elected chairman of the Service Managers' bureau of the St. Louis Automobile Dealers' Association at the annual meeting. Other officers elected are P. W. Peisue, Berry Motor Car Co., first vice-chairman; A. N. Hoffner, Hudson-Frampton Co., second vice-chairman. The meeting was addressed by George M. Berry, president of the Berry Motor Co., who stressed the importance of the service department.

Teach Proper Lubrication

COLUMBUS, April 12.—A. C. Faeh, secretary-manager of the Ohio Council of the National Automobile Dealers' Association, is accompanying W. G. Thompson, a lubrication expert of Chicago, in a tour of Ohio cities and towns, explaining proper lubrication of automobiles. The campaign, which will reach every city and town of 5,000 population or more, started in March and will continue for about a month. Local automobile dealers are called together and lectures are given on scientific methods of lubrication. Mr. Faeh is interesting the various dealers in the work of the national association which has undertaken the campaign. A meeting is scheduled for Columbus, April 23.

Willys-Overland Reports Net Profit \$11,422,777

Largest Volume Both in Dollars and Units Is Shown for 1925

TOLEDO, April 12.—The Willys-Overland company with a volume of business amounting to \$180,000,000 and a net income of \$16,936,185, experienced the best year in its history in 1925, according to the report of President John N. Willys.

The company sold 214,460 cars as compared with 162,988 in 1924, which furnished the largest volume of sales in dollars and in units, both domestic and foreign, on record.

From the net income the company has charged off \$3,773,408 representing all previously deferred and current charges incurred in the development of new models, instead of leaving any part of it to be charged off in 1926.

This left net profit of \$11,422,777 after all charges, including federal taxes, or the equivalent of \$4.36 a share on common stock after preferred dividends. This compares with \$2,086,645 or 23 cents a share in 1924.

In addition to the regular \$1,000,000 of 6½ per cent bonds retired July 1, the company purchased \$525,000 leaving \$7,475,000 outstanding at the close of the year. The company did not require bank credit despite its big volume of business.

The balance sheet shows cash of \$725,962 and time certificates of deposit of \$7,010,000, inventory, \$27,300,995 and total current assets of \$42,014,850. Permanent assets less depreciation amounted to \$27,510,534. Good-will and patents are carried at \$10.

Current liabilities are \$4,934,950, bonds, \$7,475,000, stock purchase contract, \$609,960, reserves, \$2,863,038, preferred stock, \$22,049,500, common, \$11,323,305, and surplus balance, \$25,819,582.

New Graham Buildings

EVANSVILLE, Ind., April 12.—Graham Brothers will open three new building units at the local motor truck plant about April 15, W. J. Heilman, southern territorial sales manager, announced. The new units, each 80x240 feet of steel, concrete and brick, have been under construction for several weeks but completion has been delayed owing to delays in shipments of material. The plant addition will increase daily production from 60 trucks, to 80 trucks a day.

N. Y. Sales Set Records

NEW YORK, April 12.—C. H. Jennings, Inc., reports orders for 615 Dodge cars in March compared with 270 in March last year, an increase of nearly 127 per cent. These figures apply to Manhattan alone. Total sales for the entire Jennings territory, covering also the Bronx, part of Westchester county and Fairfield

Coming Motor Events

Automobile Shows

1927 NATIONAL SHOWS

New York.....Jan. 8-15

Chicago.....Jan. 29-Feb. 5

Denver, Colo.....Aug. 3-6
Chicago.....Nov. 15-19

(Annual show and convention of National Standard Parts Association.)

Races

Atlantic City, N. J.....May 1, 1926
Charlotte, N. C.....May 10, 1926
Indianapolis, Ind.....May 31, 1926
Altoona, Pennsylvania.....June 12, 1926

COMING FEATURES OF CHILTON

May 6—Motor Age—Sales and Service Reference Number.

Salem, New Hampshire.....	July 5, 1926
Atlantic City, N. J.....	July 17, 1926
Altoona, Pennsylvania.....	Sept. 6, 1926
Salem, New Hampshire.....	Sept. 25, 1926
Atlantic City, N. J.....	Oct. 27, 1926
Charlotte, N. C.....	Nov. 11, 1926
Los Angeles, Cal.....	Nov. 25, 1926

Conventions

Texas Automotive Dealers' Association, Tenth annual, Galvez Hotel, Galveston, Tex., May 12-13.

Automobile Body Builders' Association, annual, Hotel Statler, Detroit, June 8-10. Exhibition in connection.

Automotive Equipment Association summer convention, Mount Royal Hotel, Montreal, Canada, June 14-19.

CLASS JOURNAL PUBLICATIONS

May—Automobile Trade Journal—"Biggest Market" Issue.

county, Conn., were 1,297, exceeding last March by 774 or 147 per cent and passing the biggest month for Dodge in this territory by 692. R. G. Craig, sales manager, reports that the first quarter's sales figures have passed the former first quarter record by a wide margin.

Paige-Jewett Expands Scope in Northwest

SEATTLE, April 12.—Developments of especial interest to the automobile business of Seattle and the northwest and to Paige and Jewett in particular, were announced by Henry Krohn, vice-president in charge of sales of the Paige-Detroit Motor Car company, who with a number of business associates visited Seattle.

These developments include the establishment here of three new officials, enlargements of the scope of the company in this district, inaugurating a more intensive and extensive sales and service policy, and a general reorganization of the personnel of the dealer representatives here.

The three newly appointed Northwestern officials who were brought here from Detroit are S. B. Denzel district service manager; John F. Mauro, sales manager who succeeds Newton Gresser, and J. A. MacDonald, warehouse manager in charge of the factory branch here. All will make their headquarters in Seattle, and Mr. Denzel and Mr. Mauro will travel the Northwest territory.

Hupp Shipments Gain

DETROIT, April 12.—Hupp Motor Car Corp. shipped 4,732 cars in March against 4,042 in February this year and 3,733 in March last year. Last month was the record production month for this company. More than 5,000 cars were shipped in March, 1923, but many of these were made up and shipped out of stock. The 4,732 shipped last month represents

actual production during the month. Dealers now have one month's supply on hand. First quarter production was 13,117 cars against 8,846 in the same quarter last year.

Detroit Titles Increase

DETROIT, April 12.—Titling of new cars in Wayne county for March showed an increase of 1,425 as compared to March, 1925. Open cars showed a decline of 852 and closed gained 2,277. The drop in open cars and the gain in closed cars can be attributed to the severe weather which Detroit and Wayne county has experienced during the past month and a half.

Verville Opens Production

DETROIT, April 12.—Following highly successful test flights at Packard Field, production has commenced at the plant of the Buhl-Verville Aircraft Co. on the new "Verville-Airster" commercial airplanes. Among the purchasers of the first production planes to be turned out is Henry S. DuPont of the General Motors Research Corp. Instead of the regular equipment of a Curtiss OX-5 engine Mr. DuPont's plane will be powered with a 200 h.p. Wright air-cooled engine which will give the three seater biplane a speed of 130 m.p.h.

Six machines are under construction at the present time and these will be delivered to the purchasers by May 1. As soon as this batch is completed production will begin on a larger scale.

Firm Buys Own Home

BOSTON, April 12.—The Hinchcliffe Motor Company, New England distributors for the Jordan line, that moved into a new building at 1040-1048 Commonwealth Avenue a month ago, has just signed papers by which it becomes the owner of the property. It is one of the best on Commonwealth Avenue and has a high property value.

Prices and Weights of Current Passenger Car Models

SHIP. WT. PASS. BODY STYLE. PRICE	SHIP. WT. PASS. BODY STYLE. PRICE	SHIP. WT. PASS. BODY STYLE. PRICE	SHIP. WT. PASS. BODY STYLE. PRICE
AJAX 108 in. W. B.	CHRYSLER (Continued) "70" (112 1/4 in. W. B.)	ELCAR "4-55"	"New Day"
2210 5-p Touring \$865	2805 4-p Roadster \$1,625	2560 5-p Touring \$1,095	..... 5-p Touring DeL. \$1,095
2410 5-p Sedan 995	2785 5-p Phaeton 1,395	..... 4-p Roadster 1,295	..... 5-p Sedan 995
APPERSON "6"	2895 5-p Coach 1,445	2900 5-p Coach 1,195	..... 5-p Sedan De Luxe 1,095
3100 5-p Phaeton \$1,575	2935 4-p Royal Coupe 1,795	2779 5-p Sedan 1,395	
3130 5-p Sp. Phaeton 1,650	2995 5-p Brougham 1,865		JORDAN "J"
3145 4-p Coupe 2,050	3060 5-p Sedan 1,695		..... 4-p Playboy Road. \$1,845
3570 5-p Sp. Sedan 2,100	3085 5-p Royal Sedan 1,995		..... 5-p Sedan 1,945
	3090 5-p Crown Sedan 2,095		..... 4-p Victoria 1,945
			Series "A"
			3340 5-p Touring 2,275
			3625 5-p Brougham 2,575
			3525 5-p Sedan 2,675
			3470 7-p Sedan 2,675
			KISSEL "55"
			3130 2-p Speedster \$1,795
			..... 2-p Sp. dster DeL. 2,085
			..... 4-p Speedster 1,895
			..... 4-p Sp. dster DeL. 2,185
			3530 2-p Enc. Speedster 2,085
			..... 4-p Enc. Speedster 2,185
			..... 4-p Enc. Spd. DeL. 2,685
			..... 2-p Enc. Spd. DeL. 2,585
			3190 4-p Tourster 1,795
			2980 5-p Phaeton 1,555
			3170 5-p Phaeton DeL. 1,785
			..... 7-p Touring 1,685
			..... 7-p Touring DeL. 1,885
			..... 4-p Coupe Roadster 1,695
			3430 4-p Coupe 2,085
			3540 5-p Coupe DeL. 2,485
			..... 5-p Broug. Sedan 1,995
			..... 5-p Brougham 2d. 1,695
			4070 7-p Sedan De Luxe 3,085
			4010 7-p Ber. Sed. DeL. 3,125
			3530 5-p Victoria 2,185
			..... 5-p Victoria DeL. 2,485
			BUICK "Standard"
			3215 5-p Sport Sedan 1,625
			CLEVELAND "31"
			2185 5-p Touring 1,145
			2395 5-p Coach 789*
			*Delivered, Detroit. Mfrs. do not quote F. O. B. prices.
			ESSEX
			2185 5-p Touring 1,145
			2395 5-p Coach 789*
			FLINT "E-80"
			3325 4-p Sport Road. \$1,945
			3245 5-p Touring 1,595
			3310 4-p Sp. Touring 1,945
			3245 4-p Coupe 2,045
			3595 5-p Sedan 2,195
			..... 7-p Sedan 2,395
			B-60
			2715 4-p Roadster 1,395
			5-p Touring 1,285
			4-p Coupe Roadster 1,495
			5-p Sedan 4d. 1,525
			2965 5-p Brougham 1,575
			DAGMAR "Z-18"
			1640 5-p Coach 1,085
			5-p DeL. Coach 1,185
			FORD "75"
			2980 5-p Speedster 2,195
			3170 5-p Spdster DeL. 2,485
			..... 4-p Speedster 2,295
			3245 5-p Spdster DeL. 2,585
			..... 4-p Spdster DeL. 2,885
			3515 5-p Sp. Touring 1,745
			3670 5-p Sp. Touring 1,945
			3765 5-p Sp. Sedan 1,495
			CUNNINGHAM "V-6"
			1645 2-p Roadster 1,250
			1655 2-p Touring 1,250
			1665 2-p Coupe 1,250
			1675 2-p Sedan 1,250
			DAVIES "6-70"
			1685 2-p Roadster 1,250
			1695 2-p Touring 1,250
			1705 2-p Coupe 1,250
			1715 2-p Sedan 1,250
			DIANA "St. 8"
			1725 2-p Roadster 1,250
			1735 2-p Touring 1,250
			1745 2-p Coupe 1,250
			1755 2-p Sedan 1,250
			DODGE BROTHERS "6-A"
			1765 2-p Roadster \$1,395
			1775 2-p Special Roadster 845
			1785 5-p Touring 795
			1795 5-p Spec. Touring 845
			1805 5-p Coupe "B" 845
			1815 5-p Spec. Coupe "B" 895
			1825 5-p "B" Sedan 895
			1835 5-p Spec. "B" Sed. 945
			1845 5-p DeL. "A" Sed. 1,075
			DUESENBERG "11"
			1855 2-p Sport Road. \$2,750
			1865 2-p Touring 2,625
			1875 3-p Coupe 3,150
			1885 3-p Sedan 3,225
			1895 5-p Limousine 3,275
			1905 5-p Cabriolet 4,400
			1915 5-p Oxford Sedan 3,172
			GARDNER "8-A"
			1925 2-p Roadster \$1,395
			1935 2-p Sp. Roadster 1,395
			1945 5-p Brougham 1,545
			1955 5-p Std. Sedan 1,595
			DODGE BROTHERS "8-A"
			1965 2-p Roadster 1,795
			1975 2-p De Luxe Sedan 2,195
			1985 2-p Cabriolet 2,095
			1995 2-p Sedan 2,445
			FRANKLIN "11"
			2005 2-p Sport Road. \$2,750
			2015 2-p Touring 2,625
			2025 3-p Coupe 3,150
			2035 3-p Sedan 3,225
			2045 5-p Limousine 3,275
			2055 5-p Cabriolet 4,400
			2065 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2075 2-p Sport Road. \$2,750
			2085 2-p Touring 2,625
			2095 3-p Coupe 3,150
			2105 3-p Sedan 3,225
			2115 5-p Limousine 3,275
			2125 5-p Cabriolet 4,400
			2135 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2145 2-p Sport Road. \$2,750
			2155 2-p Touring 2,625
			2165 3-p Coupe 3,150
			2175 3-p Sedan 3,225
			2185 5-p Limousine 3,275
			2195 5-p Cabriolet 4,400
			2205 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2215 2-p Sport Road. \$2,750
			2225 2-p Touring 2,625
			2235 3-p Coupe 3,150
			2245 3-p Sedan 3,225
			2255 5-p Limousine 3,275
			2265 5-p Cabriolet 4,400
			2275 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2285 2-p Sport Road. \$2,750
			2295 2-p Touring 2,625
			2305 3-p Coupe 3,150
			2315 3-p Sedan 3,225
			2325 5-p Limousine 3,275
			2335 5-p Cabriolet 4,400
			2345 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2355 2-p Sport Road. \$2,750
			2365 2-p Touring 2,625
			2375 3-p Coupe 3,150
			2385 3-p Sedan 3,225
			2395 5-p Limousine 3,275
			2405 5-p Cabriolet 4,400
			2415 5-p Oxford Sedan 3,172
			FRANKLIN "11"
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			2435 2-p Touring 2,625
			2445 3-p Coupe 3,150
			2455 3-p Sedan 3,225
			2465 5-p Limousine 3,275
			2475 5-p Cabriolet 4,400
			2485 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2495 2-p Sport Road. \$2,750
			2505 2-p Touring 2,625
			2515 3-p Coupe 3,150
			2525 3-p Sedan 3,225
			2535 5-p Limousine 3,275
			2545 5-p Cabriolet 4,400
			2555 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2565 2-p Sport Road. \$2,750
			2575 2-p Touring 2,625
			2585 3-p Coupe 3,150
			2595 3-p Sedan 3,225
			2605 5-p Limousine 3,275
			2615 5-p Cabriolet 4,400
			2625 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2635 2-p Sport Road. \$2,750
			2645 2-p Touring 2,625
			2655 3-p Coupe 3,150
			2665 3-p Sedan 3,225
			2675 5-p Limousine 3,275
			2685 5-p Cabriolet 4,400
			2695 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2705 2-p Sport Road. \$2,750
			2715 2-p Touring 2,625
			2725 3-p Coupe 3,150
			2735 3-p Sedan 3,225
			2745 5-p Limousine 3,275
			2755 5-p Cabriolet 4,400
			2765 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2775 2-p Sport Road. \$2,750
			2785 2-p Touring 2,625
			2795 3-p Coupe 3,150
			2805 3-p Sedan 3,225
			2815 5-p Limousine 3,275
			2825 5-p Cabriolet 4,400
			2835 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2845 2-p Sport Road. \$2,750
			2855 2-p Touring 2,625
			2865 3-p Coupe 3,150
			2875 3-p Sedan 3,225
			2885 5-p Limousine 3,275
			2895 5-p Cabriolet 4,400
			2905 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2915 2-p Sport Road. \$2,750
			2925 2-p Touring 2,625
			2935 3-p Coupe 3,150
			2945 3-p Sedan 3,225
			2955 5-p Limousine 3,275
			2965 5-p Cabriolet 4,400
			2975 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			2985 2-p Sport Road. \$2,750
			2995 2-p Touring 2,625
			3005 3-p Coupe 3,150
			3015 3-p Sedan 3,225
			3025 5-p Limousine 3,275
			3035 5-p Cabriolet 4,400
			3045 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3055 2-p Sport Road. \$2,750
			3065 2-p Touring 2,625
			3075 3-p Coupe 3,150
			3085 3-p Sedan 3,225
			3095 5-p Limousine 3,275
			3105 5-p Cabriolet 4,400
			3115 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3125 2-p Sport Road. \$2,750
			3135 2-p Touring 2,625
			3145 3-p Coupe 3,150
			3155 3-p Sedan 3,225
			3165 5-p Limousine 3,275
			3175 5-p Cabriolet 4,400
			3185 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3195 2-p Sport Road. \$2,750
			3205 2-p Touring 2,625
			3215 3-p Coupe 3,150
			3225 3-p Sedan 3,225
			3235 5-p Limousine 3,275
			3245 5-p Cabriolet 4,400
			3255 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3265 2-p Sport Road. \$2,750
			3275 2-p Touring 2,625
			3285 3-p Coupe 3,150
			3295 3-p Sedan 3,225
			3305 5-p Limousine 3,275
			3315 5-p Cabriolet 4,400
			3325 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3335 2-p Sport Road. \$2,750
			3345 2-p Touring 2,625
			3355 3-p Coupe 3,150
			3365 3-p Sedan 3,225
			3375 5-p Limousine 3,275
			3385 5-p Cabriolet 4,400
			3395 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3405 2-p Sport Road. \$2,750
			3415 2-p Touring 2,625
			3425 3-p Coupe 3,150
			3435 3-p Sedan 3,225
			3445 5-p Limousine 3,275
			3455 5-p Cabriolet 4,400
			3465 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3475 2-p Sport Road. \$2,750
			3485 2-p Touring 2,625
			3495 3-p Coupe 3,150
			3505 3-p Sedan 3,225
			3515 5-p Limousine 3,275
			3525 5-p Cabriolet 4,400
			3535 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3545 2-p Sport Road. \$2,750
			3555 2-p Touring 2,625
			3565 3-p Coupe 3,150
			3575 3-p Sedan 3,225
			3585 5-p Limousine 3,275
			3595 5-p Cabriolet 4,400
			3605 5-p Oxford Sedan 3,172
			FRANKLIN "11"
			3615 2-p Sport Road. \$2,750
			3625 2-p Touring 2,625
			3635 3-p Coupe 3,150
			3645 3-p Sedan 3,225
			3655 5-p Limousine 3,275
			3665 5-p Cabriolet 4,400
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Prices and Weights of Current Passenger Car Models

SHIP.	WT.	PASS.	BODY	STYLE.	PRICE
McFARLAN "6" (Continued)					
"SV"					
3850	4-p	Coupe	\$3,180		
3850	5-p	Sedan	3,180		
3850	5-p	Spec. Sedan	3,180		
3850	7-p	Sedan	3,280		
3850	5-p	Sub. Sedan	3,380		
3850	7-p	Sub. Sedan	3,480		
3850	5-p	Brougham 4d.	3,180		
"TV"					
4000	2-p	Roadster	\$5,400		
4600	4-p	Sp. Touring	5,600		
4900	4-p	Coupe	6,720		
5200	4-p	Tour. Sedan	6,720		
5200	7-p	Tour. Sedan	6,810		
5200	6-p	Sedan	6,720		
5200	7-p	Sedan	6,810		
5200	7-p	Spec. Sedan	6,810		
5200	7-p	Enc. Sedan	7,110		
5200	7-p	Sub. Sedan	7,110		
5200	7-p	Town Car	9,000		
"Straight 8"					
4060	2-p	Roadster	\$2,650		
4090	5-p	Touring	3,760		
4023	4-p	Sp. Touring	3,900		
4242	4-p	Coupe	4,650		
4528	5-p	Sedan	4,750		
4528	2-p	Coupe	5,775		
4060	4-p	Runabout	\$3,950		
4090	5-p	Touring	3,760		
4199	7-p	Touring	\$3,950		
4199	5-p	Club Sedan	4,890		
4345	5-p	Sedan	5,000		
4655	7-p	Sedan	5,100		
4710	7-p	Sedan Lim.	5,100		
PAIGE					
"24-26"					
3695	2-p	Speedster	\$3,295		
3604	5-p	Phaeton	3,295		
3704	7-p	Touring	3,295		
4080	5-p	Std. Brougham	3,295		
3937	4-p	Victoria	3,295		
3983	2-p	Std. Coupe	3,295		
4065	5-p	Sedan	3,295		
4243	7-p	Sedan	3,370		
4080	5-p	Spec. Brougham	3,395		
4065	5-p	Spec. Sedan	3,395		
4243	7-p	Spec. Sedan	3,470		
4031	5-p	Sedan De Luxe	3,775		
4175	7-p	Sedan De Luxe	3,850		
4100	5-p	Sedan Lim.	3,900		
4215	7-p	Sedan Lim.	3,975		
MOON					
Series "A"					
2600	5-p	Roadster	\$1,395		
2720	5-p	Cab. Roadster	1,545		
2560	5-p	Touring	1,195		
2710	5-p	Coach	1,295		
2710	5-p	DeL. Sedan 2d.	1,495		
2850	5-p	Std. Sedan 4d.	1,445		
2860	5-p	DeL. Sedan 4d.	1,595		
London					
3270	5-p	Sp. Touring	\$1,985		
3290	7-p	Touring	1,985		
3590	5-p	Petite Sedan	2,540		
NASH					
"Special"					
2870	2-p	Roadster	\$1,115		
2960	5-p	Touring	1,135		
3030	2-p	Business Coupe	1,165		
3120	5-p	Sedan 2d.	1,215		
3176	5-p	Sedan	1,315		
3270	5-p	Sedan 4d.	1,445		
"Advanced"					
(121 in. W. B.)					
3390	4-p	Roadster	1,475		
3400	5-p	Touring	1,340		
3550	5-p	Sedan 2d.	1,425		
"Advanced"					
(127 in. W. B.)					
3480	7-p	Touring	\$1,490		
3640	4-p	Victoria	1,790		
3750	5-p	Coupe 4d.	1,990		
3830	7-p	Sedan	2,090		
OAKLAND					
"6"					
2425	2-p	Roadster	\$975		
2500	6-p	Touring	1,025		
2600	4-p	Sp. Roadster	1,175		
2640	5-p	Coach	1,095		
2615	3-p	Landau Coupe	1,125		
2765	5-p	Sedan	1,195		
2885	5-p	Landau Sedan	1,295		
OLDSMOBILE					
"30"					
2235	5-p	Touring	\$875		
2445	4-p	DeL. Roadster	975		
2445	5-p	DeL. Touring	950		
2460	5-p	Coupe	925		
2460	5-p	Coach	950		
2460	2-p	De Luxe Coupe	990		
2660	5-p	De Luxe Coach	1,040		
2535	5-p	Sedan	1,025		
2735	5-p	De Luxe Sedan	1,115		
OVERLAND					
"91" 4 (100 in. W. B.)					
1919	5-p	Touring	\$495		
2205	5-p	Sedan De Luxe	695		
2202	5-p	Std. Sedan 2d.	695		
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WT.					

Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a *newwheel* basis

MAKE AND MODEL		WHEEL BASE (inches)		TIRE SIZE- DECEMILS-BALLONS		NUMBER OF CYLIES- BORE AND STROKE		ENGINE		ELECTRICAL SYSTEM		CLUTCH-TYPE AND MAKE		GEAR SET-MAKE		UNIVERSAL SYSTEMS-TYPE AND MAKE		CLUTCH-TYPE AND MAKE		GEAR RATIO AND MAKE		FOOT-TRUCK TYPE AND LOCATION		Screwing Gear-Make		Rear Springs-Type and Length		Type and Make		CHASSIS AND MAKE	
AAK-Awatertown-Kent								A-K-Awatertown-Kent		A-L-Auto-Lite																					
AB-Ade-A Adams								A-L-Ade-A Adams		A-L-Ade-A Adams																					
AC-Al-Alemite								A-L-Al-Alemite		A-L-Al-Alemite																					
AD-An-Anstet								A-L-An-Anstet		A-L-An-Anstet																					
AE-B-Borg & Beck								A-L-B-Borg & Beck		A-L-B-Borg & Beck																					
AF-B-Brown-Ilp-B-Ball								A-L-B-Brown-Ilp-B-Ball		A-L-B-Brown-Ilp-B-Ball																					
AG-B-Basic-eure								A-L-B-Basic-eure		A-L-B-Basic-eure																					
AH-B-Bowen Products								A-L-B-Bowen Products		A-L-B-Bowen Products																					
AI-Car-Carver								A-L-Car-Carver		A-L-Car-Carver																					
AM-CAS Products								A-L-CAS Products		A-L-CAS Products																					
AN-Cle-Cleveland								A-L-Cle-Cleveland		A-L-Cle-Cleveland																					
AO-Clin-Clinch								A-L-Clin-Clinch		A-L-Clin-Clinch																					
AP-Contin-Continental								A-L-Contin-Continental		A-L-Contin-Continental																					
AR-Colum-Columbia								A-L-Colum-Columbia		A-L-Colum-Columbia																					
AS-Dawn-Dawn								A-L-Dawn-Dawn		A-L-Dawn-Dawn																					
AT-Del-Del-Jet								A-L-Del-Del-Jet		A-L-Del-Del-Jet																					
AU-Det-Detroit								A-L-Det-Detroit		A-L-Det-Detroit																					
AV-Full-Fuller								A-L-Full-Fuller		A-L-Full-Fuller																					
AW-God-Goodrich								A-L-God-Goodrich		A-L-God-Goodrich																					
AX-Gem-Gemmer								A-L-Gem-Gemmer		A-L-Gem-Gemmer																					
AY-Gits-Gits								A-L-Gits-Gits		A-L-Gits-Gits																					
AZ-Dyno-Dyno								A-L-Dyno-Dyno		A-L-Dyno-Dyno																					
BA-El-Eaton								A-L-El-Eaton		A-L-El-Eaton																					
BB-Fl-Flint								A-L-Fl-Flint		A-L-Fl-Flint																					
BC-Gen-Genmer								A-L-Gen-Genmer		A-L-Gen-Genmer																					
BD-H-Hillman								A-L-H-Hillman		A-L-H-Hillman																					
BE-I-International								A-L-I-International		A-L-I-International																					
BF-J-Jeep-Jeep								A-L-J-Jeep-Jeep		A-L-J-Jeep-Jeep																					
BG-K-Knight-Knight								A-L-K-Knight-Knight		A-L-K-Knight-Knight																					
CH-L-Law-Jayne								A-L-Law-Jayne		A-L-Law-Jayne																					
CI-M-Marvel-Everitt								A-L-Marvel-Everitt		A-L-Marvel-Everitt																					
CO-M-Mechanics-Mechanics								A-L-Mechanics-Mechanics		A-L-Mechanics-Mechanics																					
DP-M-Mun-North-East								A-L-Mun-North-East		A-L-Mun-North-East																					
EP-M-North-West								A-L-North-West		A-L-North-West																					
FP-M-Pet-Peters								A-L-Pet-Peters		A-L-Pet-Peters																					
GP-M-S-Schoenfeld								A-L-S-Schoenfeld		A-L-S-Schoenfeld																					
HP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
IP-M-S-Sheard								A-L-S-Sheard		A-L-S-Sheard																					
JP-M-S-Sheard								A-L-S-Sheard		A-L-S-Sheard																					
KP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
LP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
MP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
NP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
OP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
QP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
RP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
SP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
TP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
UP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
VP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
WP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
XP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
ZP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
AP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
BP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
CP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
DP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
EP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
FP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
GP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
HP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
IP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
NP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
OP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
QP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
RP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
SP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
TP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
WP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
XP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
ZP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
AP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
BP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
CP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
DP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
EP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
FP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
GP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
HP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
IP-M-S-Sheridan								A-L-S-Sheridan		A-L-S-Sheridan																					
NP-M-S-Sheridan								A-L-S-Sheridan																							

KEY TO SYMBOLS
† extra cost
Balloons at extra cost
§ Semi-floating
|| Three-quarter floating

Motor Age

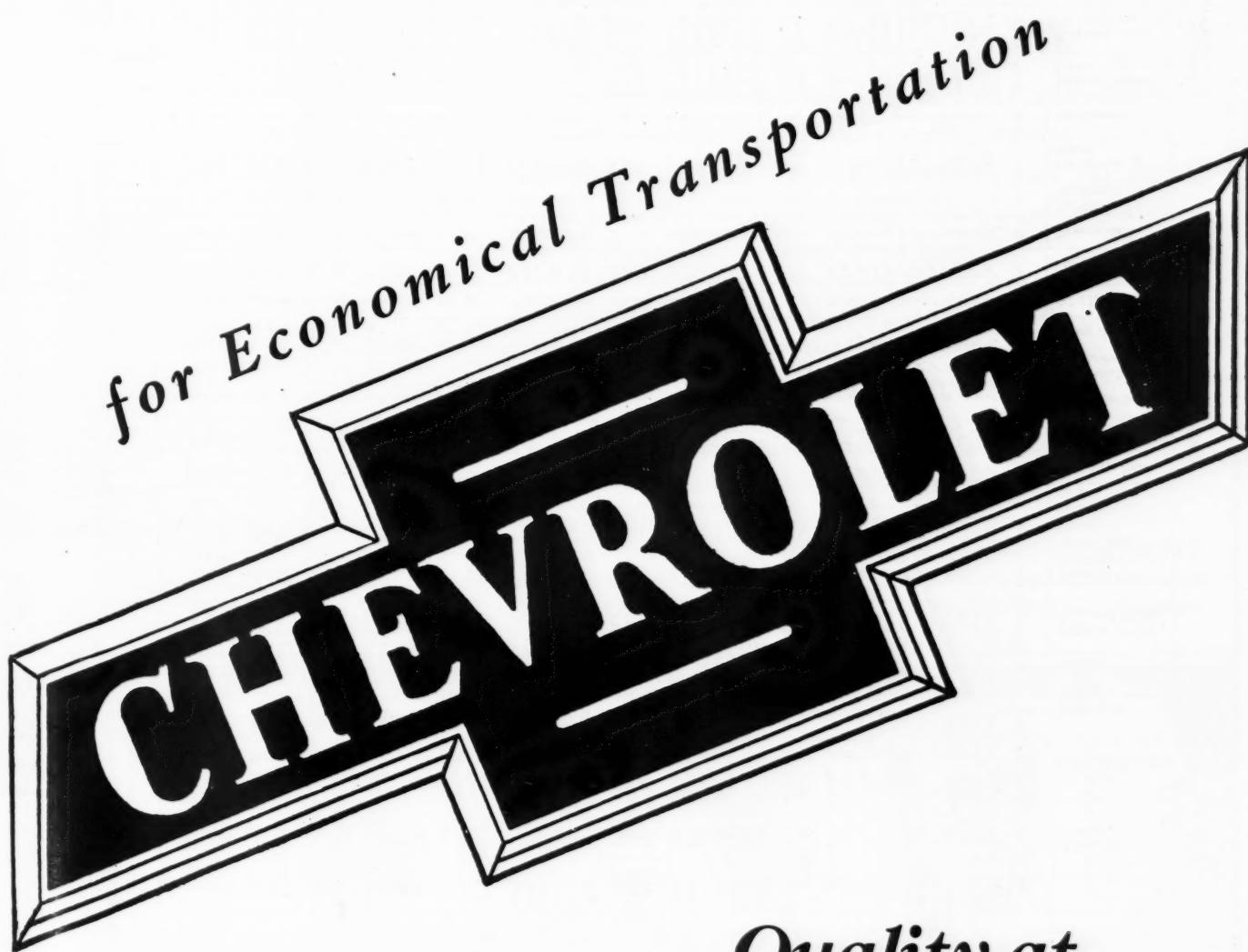
sp—	spur gear	(cushion)	sp—	Warner
drive			W—	Westinghouse
drive	Special make		W.M.—	Willys-Morror
sta—	Standard		Wis—	Wisconsin
sta—	T	head	Ze—	Zerk
Th—	Thermo-syphon		Zen—	Zenith
V—	Cantilever			
V—	Varies			
V—	Sleeve valve			
V—	Yes			

Continued on page 48

EDWIN

1,000 more dealers than
a year ago! Outstanding
evidence of the value of
a Chevrolet franchise.

CHEVROLET MOTOR CO., DETROIT, MICHIGAN
Division of General Motors Corporation



*Quality at
Low Cost*

Mechanical Specifications of Current Passenger Car Models—Continued

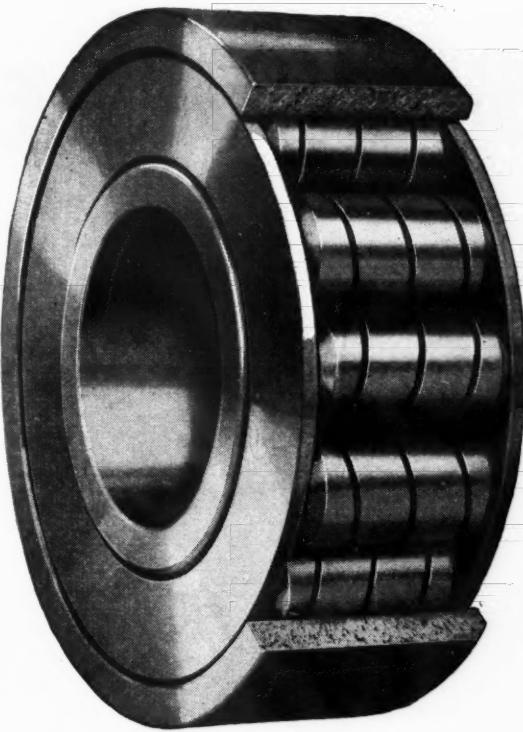
(From page

(This list comprises cars distributed on a national basis)

MAKE AND MODEL		WHEEL BASE (inches)		TIRE SIZE-BALLOONS		BORE AND STROKE NUMBER OF CYLIES		ENGINE		ELECTRICAL SYSTEM		REAR AXLE		BRAKES				
Marmen.....74	136	34x7.30	Own....74	6-3/8x5 1/2	33.8	340 I	He.../AI	3	N P.F. Y	Pu. N	N Sch...	N	Delco	D.Own.	Own. m.Spi.			
McFarlan.....SV	127	33x6.20	Wls....Y	6-3/8x5 1/2	27.3	288 I	Ch.../C.I.	3	P.F. N	Pu. N	Ray...	N	Delco	D Long.	W.G. m...			
McFarlan.....Sl. 8	133	33x6.75	Wyo....AH	6-3/8x5 1/2	27.3	288 L	Ch.../C.I.	3	P.F. N	Pu. N	Ray...	N	Delco	D Long.	W.G. m...			
McFarlan.....Sl. 14	128	33x6.75	Wyo....AH	6-3/8x5 1/2	48.6	573 T	He.../AI	4	P.F. N	Pu. N	Ray...	N	Delco	D Long.	W.G. m...			
McFarlan.....TV	114	32x6.25	Con....8R	6-3/8x5 1/2	27.3	224 L	He.../C.I.	4	P.F. N	Pu. N	Ray...	N	Delco	D Long.	W.G. m...			
McFarlan.....London	128	32x6.25	Con....8R	6-3/8x5 1/2	27.3	224 L	He.../C.I.	4	P.F. N	Pu. N	Ray...	N	Delco	D Long.	W.G. m...			
McFarlan.....Moon.	113	32x6.25	Con....8R	6-3/8x5 1/2	23.4	196 L	He.../C.I.	4	P.F. N	Pu. N	Ray...	N	Delco	D Long.	W.G. m...			
McFarlan.....Advanced	121-127	33x8.00	Own....261	6-3/8x5 1/2	28.4	279 I	He.../C.I.	3	N P.C.	Y Pu. N	Mar...	Y	Delco	D Long.	W.G. m...			
Nash.....Special	111 1/2	30x5.25	Own....231	6-3/8x5 1/2	23.4	225 L	He.../C.I.	3	N P.C.	Y Pu. N	Mar...	Y	Delco	D Long.	W.G. m...			
Nash....."G"	113	30x5.25	Own....231	6-3/8x5 1/2	19.8	185 L	Ch.../B.I.	3	N P.C.	Y Pu. N	Mar...	Y	Delco	D Long.	W.G. m...			
Oakland.....Diamondobile	30	30x4.95	Own....91	6-3/8x5 1/2	18.2	169 L	He.../C.I.	3	N P.C.	Y Pu. N	Mar...	Y	Delco	D Long.	W.G. m...			
Oakland.....Orveland	91	30x4.95	Own....91	6-3/8x5 1/2	19.6	154 L	He.../C.I.	3	N P.C.	Y Pu. N	Mar...	Y	Delco	D Long.	W.G. m...			
Oakland.....Orveland	93	30x4.95	Own....91	6-3/8x5 1/2	21.6	170 L	He.../C.I.	3	N P.C.	Y Pu. N	Mar...	Y	Delco	D Long.	W.G. m...			
Packard.....Packard	126-133	33x5.77	Own....63-3/4x5	29.4	289 L	Ch.../C.I.	7	N P.F. R	Pu. Y	Own. N	Delco	D Long.	W.G. m...	Own. N				
Packard.....Packard	125	33x6.75	Own....63-3/4x5	25.4	249 L	Ch.../C.I.	7	N P.F. R	Pu. Y	Own. N	Delco	D Long.	W.G. m...	Own. N				
Pearless.....8	128-133	33x6.00	Own....72	6-3/8x5 1/2	29.4	289 L	Ch.../C.I.	7	N P.C.	Y Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pearless.....24-26	125	33x6.00	Own....80	6-3/8x5 1/2	25.3	322 L	Ch.../C.I.	7	N P.C.	Y Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pearless.....6-80	116	33x6.75	Own....80	6-3/8x5 1/2	33.8	315 L	Ch.../C.I.	7	N P.C.	Y Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pearless.....8-69	133	33x6.75	Own....80	6-3/8x5 1/2	33.8	315 L	Ch.../C.I.	7	N P.C.	Y Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pierce Arrow.....33	133	32x5.77	Own....33	6-3/8x5 1/2	34.4	215 T	He.../C.I.	7	N P.F. Y	Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pierce Arrow.....50	130	32x5.77	Own....30	6-3/8x5 1/2	29.4	288 L	Ch.../C.I.	7	N P.F. Y	Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pontiac.....Sun	110	29x4.75	Own....70	6-3/8x5 1/2	25.3	183 L	Ch.../B.I.	3	N P.C.	Y Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Pontiac.....Red	120	32x6.20	Own....70	6-3/8x5 1/2	24.3	239 G	He.../Al.	4	N P.C.	Y Pu. N	Own. N	Delco	D Long.	W.G. m...	Own. N			
Revere.....M	131	32x4 1/2	Mon....6-4 1/2x5 1/2	30.6	326 L	Ch.../Al.	4	P.C.	Y Pu. N	Own. N	Str...	N	Bosch	W.B.B.	B-L. m...			
Revere.....25	131	32x6.20	Con....6-3/8x5 1/2	33.8	331 L	Ch.../Al.	4	P.C.	Y Pu. N	Own. N	Str...	N	Bosch	F.B.B.	F-L. m...			
Rickenbacker.....E	117	31x5.25	Own....6-3/8x5 1/2	25.3	236 L	Ch.../C.I.	7	N P.C.	Y Pu. N	Own. N	Str...	Y	Delco	P. Long.	W.G. m...			
Rickenbacker.....E	125	31x5.25	Own....6-3/8x5 1/2	25.3	236 L	Ch.../C.I.	7	N P.C.	Y Pu. N	Own. N	Str...	Y	Delco	P. Long.	W.G. m...			
Rickenbacker.....B-8	118-133	33x6.00	Own....B-8	6-3/8x5 1/2	33.8	315 L	Ch.../C.I.	9	N P.C.	Y Pu. N	Own. N	Zen...	N	Delco	P. Long.	W.G. m...		
Rickenbacker.....B-8	123	32x4 1/2	Con....9N	6-3/8x5 1/2	31.5	245 T	He.../C.I.	3	N P.C.	Y Pu. N	Own. N	Str...	N	Delco	P. Long.	W.G. m...		
Rosmer.....4-54 E	123	32x4 1/2	Con....D-D	6-3/8x5 1/2	44.2	245 T	He.../C.I.	3	N P.C.	Y Pu. N	Own. N	Str...	N	Delco	P. Long.	W.G. m...		
Rosmer.....6-50-55	135	32x6.20	Con....70	6-3/8x5 1/2	31.5	245 T	He.../C.I.	3	N P.C.	Y Pu. N	Own. N	Str...	N	Delco	P. Long.	W.G. m...		
Rosmer.....8-88	138	32x6.20	Con....70	6-3/8x5 1/2	28.8	254 L	He.../C.I.	4	N P.C.	Y Pu. N	Own. N	Str...	N	Delco	P. Long.	W.G. m...		
Rolls Royce.....Silver Ghost	143 1/2	33x5.77	Own....40-6-4 1/2x5 1/2	48.6	453 L	He.../Al.	7	N P.F. Y	Pu. N	Own. N	Str...	N	Delco	D.M.E.	W.G. m...			
Stanley.....262	123	32x5.77	Own....282	2-4 1/2	20.0	122 L	Ch.../C.I.	2	Spk. Spe	3	P.K. N	Pu. N	Own. N	Str...	N	Delco	D.M.E.	W.G. m...
Stanley.....4	103	30x3 1/2	Con....Spec. 4-3/8x5 1/2	18.2	169 L	Ch.../C.I.	4	Spk. Spe	3	P.K. N	Pu. N	Own. N	Str...	N	Delco	D.M.E.	W.G. m...	
Star....."Std. 6"	107	29x4.95	Con....Spec. 6-2 1/2x5 1/2	18.2	169 L	Ch.../C.I.	4	Spk. Spe	3	P.K. N	Pu. N	Own. N	Str...	N	Delco	D.M.E.	W.G. m...	
Studebaker.....Spec. 6	120	32x6.20	Own....Eq 6-3 1/2x5	29.4	289 L	He.../C.I.	4	Y P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Studebaker.....Big 6	127	32x6.20	Own....Eq 6-3 1/2x5	30.6	353 L	He.../C.I.	4	Y P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Stearns Knight.....B	120	33x6.00	Own....Eui 4-3 1/2x5 1/2	22.5	249 X	Ch.../C.I.	3	P.C. N	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Stearns Knight.....75	121	33x6.00	Own....Eui 6-3 1/2x5 1/2	22.5	249 X	Ch.../C.I.	3	P.C. N	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Stearns Knight.....95	130	33x6.75	Own....Eui 6-3 1/2x5 1/2	22.5	249 X	Ch.../C.I.	4	P.C. N	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Studebaker.....Sia. 6	113	31x5.25	Own....ER 6-3 1/2x5 1/2	27.3	242 L	Ch.../C.I.	4	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Studebaker.....Sia. 6	120	32x6.20	Own....Eq 6-3 1/2x5	29.4	289 L	He.../C.I.	4	Y P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Stearns Knight.....75	119	33x6.00	Own....Eui 4-3 1/2x5 1/2	22.5	249 X	Ch.../C.I.	4	P.C. N	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Stearns Knight.....75	121	33x6.00	Own....Eui 6-3 1/2x5 1/2	22.5	249 X	Ch.../C.I.	4	P.C. N	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Stearns Knight.....95	130	33x6.75	Own....Eui 6-3 1/2x5 1/2	22.5	249 X	Ch.../C.I.	4	P.C. N	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Studebaker.....Sia. 6	113	31x5.25	Own....ER 6-3 1/2x5 1/2	27.3	242 L	Ch.../C.I.	4	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	127	32x6.20	Own....BC 88 3-1/2x4	33.8	285 L	BO. C.I.	3	Y P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	126	32x6.20	Own....70 6-3 1/2x4	33.8	285 L	BO. C.I.	3	Y P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
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Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
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Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5	Own....70 6-2 1/2x4	20.7	178 X	Ch.../Al.	7	N P.K. F	Pu. N	Own. N	Str...	Y	Delco	P. Own...	W.G. m...			
Willis Sis. Clare.....B&G 68	113	30x2.5</td																

KEY TO SYMBOLS

- At extra cost
- †—Balloons at extra cost
- $\frac{1}{2}$ —Semi-floating
- $\frac{3}{4}$ —Three-quarter floating
- A—Air
- Al—Aluminum
- B—Semi-steel
- B-**I**—Both internal and external four wheels
- BU—Barrel Gear Overhead shaft



Hyatt-equipped Trucks and Buses:

Trucks:

Acason Reo
 Acme Stanford
 Ahrens Fox Schacht
 Armleder Seagrave
 Autocar Service
 Biederman Standard
 Brockway Sterling
 Chicago Stewart
 Clydesdale Stoughton
 Corbitt Traffic
 Day-Elder United States
 Diamond T White

Oil cups Oil and Grease Cups
 Oil Oil with wick feed
 One-quarter elliptic Single plate
 One-quarter elliptic Pressure plate

I-R—Internal rear wheels
 I-R—External rear wheels
 E-T—External transmission
 E-T—Fabric transmission
 F—Front
 F1—Full front
 J—Cones
 K—Gears

Buses:

American Day-Elder
 Brockway Fageol
 Commerce Federal
 Day-Elder Garford
 Fageol Graham
 Federal Hahn
 Garford Indiana
 Graham I. H. C.
 Hahn Kimball
 Indiana Mack
 I. H. C. Moreland
 Kimball Mack
 Mack Moreland
 Moreland Nelson & LeMoor
 Nelson & LeMoor Pierce Arrow
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 6 Wheel
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Hyatt Quiet Roller Bearings display every quality that could commend them to the truck and bus owner. Their operation is remarkable under the most adverse conditions. Attention is seldom required, even for lubricating purposes. Owners of the heaviest trucks will tell you of their wonderful endurance. And as the name implies, their performance is quiet—proof in itself, of surfaces practically friction-free and a minimum of wear and tear.

For these reasons, Hyatt-equipped commercial vehicles give better service, bigger profits—attain a longer life.

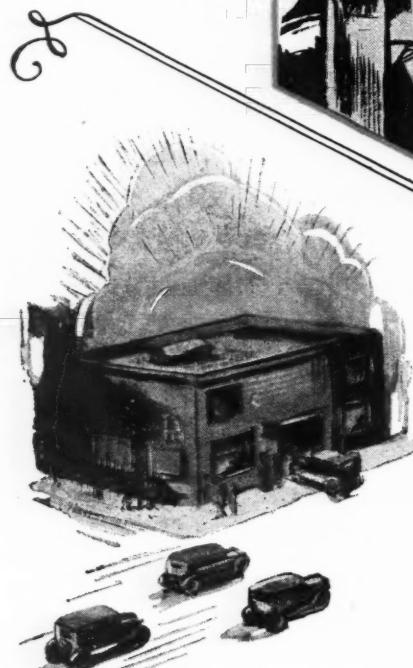
Ask the candid opinion of any of the truck or bus users listed on this page.

HYATT ROLLER BEARING COMPANY
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HYATT
 QUIET ROLLER BEARINGS

**1 Brunner Pneumatic
Valve Grinder**

Cuts down costs and increases profits. Has variable controlled speed and perfect balance. Lightest weight of all valve grinders. Doesn't tire operator. Eliminates necessity of finishing off the seat by hand.



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pays for itself in the variety of ways it may be used. In each case the use of air cuts down the time and labor involved in former hand methods, and profits are correspondingly increased.

The uses of compressed air have greatly increased during the last few years. Hence, the Brunner has become an all-purpose machine. Here's where Brunner construction enters in.

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2 Brunner Engine Cleaner

The best and quickest way to clean a motor. Reaches every spot with heavy direct pressure. Prevents short-circuiting through oil-soaked wires. Many garages find this one of the most profitable uses of air.

construction.

It is built to answer all the demands made upon it in the many uses of air. They will supply ample air for any of the operations shown above and at the same time maintain an adequate reserve supply.

Universally used by garages for free tire-inflation; a service that builds good will and leads to many profit-paying jobs.

Their constant service at low cost makes them a necessity in every garage. Send in the accompanying coupon for booklets and information.

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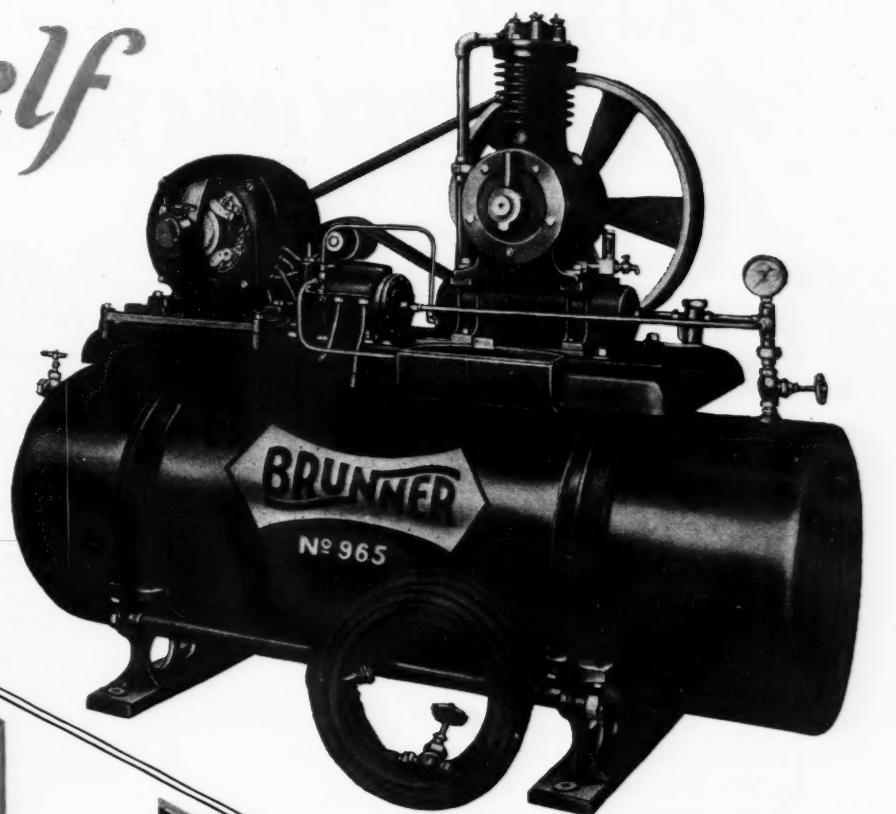
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B R U N

way a Brunner for itself

3 Brunner Paint Spray Gun

The best and quickest way to paint used cars. Easy to handle, perfect balance, easy to clean, free from leakage. The most efficient spray gun made.



BRUNNER
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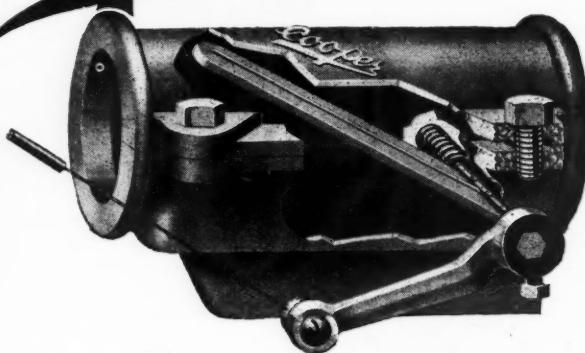
The **Cooper** CUT-OUT

Engine Tester
and Carbon
Outlet Valve

**COOPER SR. DASH
CONTROL**

A handy, handsome control for cut-out, heater valve, or choke. Always in sight and always handy.

Price \$2.50



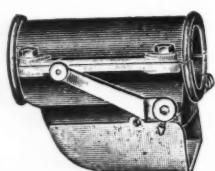
How About You?

Ever since the "early days" the Cooper Special has led the cut-out field in sales. Always a steady, year-round seller. No flash in the pan—but a never-miss profit-maker that sells because motorists *ask for it by name*.

Mud Can't Clog It

The Cooper has established its reputation as the king of cut-outs through years of satisfactory service. It is not intended as a noise-maker, but is scientifically designed as an engine tester and carbon outlet valve. It saves many a repair bill. Its clear, resonant bark is a sure aid in locating motor trouble, faulty ignition or poor compression.

Stock the Cooper Special. Sell it. Sell the Cooper Dash Control with the cut-out and make a double profit. Get YOUR share of the big profits dealers are making with these leaders. Order from your jobber or write direct—TODAY. Prices \$2.50 to \$5.00, (Valve only).



Chevrolet Special Cut-Out

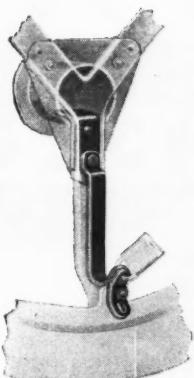
Go after Chevrolet owners with the Cooper Chevrolet Special Cut-Out. It pays for itself quickly—therefore it is an investment that will appeal to them. Here is a fast selling, big profit-making Cooper product. Priced at \$4.00 and worth much more.

Ten Sales Boosters

1. A scientifically designed engine tester.
2. Blows out loosened carbon.
3. Easily installed without severing or weakening exhaust pipe.
4. Ruggedly made with extra heavy flapper and spring.
5. Chatterproof, silent when closed.
6. Increases power of motor.
7. Saves gasoline.
8. Self-cleaning. Mud, water and dust proof.
9. Relieves back pressure on motor.
10. A combination muffler cut-out, engine tester and carbon outlet valve combined.



Throw Out the Shelf-warmers Stock these Cooper Leaders



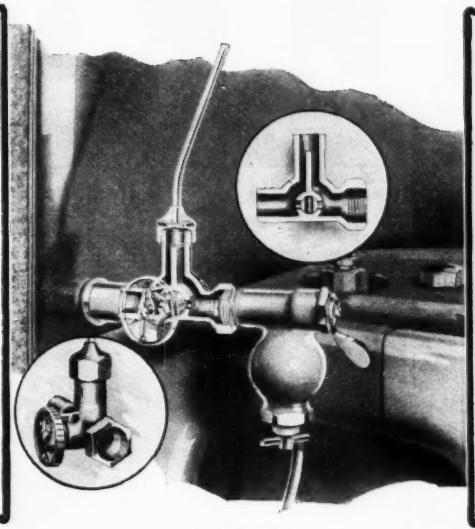
COOPER
FORD SPARE TIRE LOCK

(For New Model Ford)

Announcing the Cooper Spare Tire Lock—the best tire theft insurance on the market. Prevents pulling the carrier clear of the two upper bolts after removing the hex nuts and turning the extra carrier, rim, tire and lock off the third or lower bolt. This low priced accessory is selling like the proverbial "hot cakes". Simple—inexpensive—has a sure fire appeal to every Ford owner.

Made of steel in neat enamel finish, in sizes to fit Ford Balloon and 30 x 3½ tires.

Price \$1.00



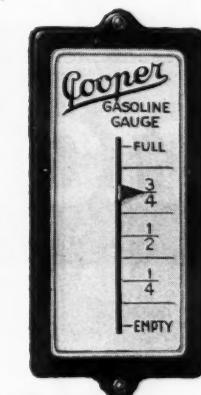
COOPER
GASOLINE RESERVE VALVE

(For Gas Tanks Under Cowl)

If you've ever hoped for a low-priced accessory that has the field to itself, a fast-turning, profit-making leader that sells on sight—put the new Cooper Gasoline Reserve Valve on your counter.

Simply remove the sediment bulb, screw the valve into its place and replace bulb on end of valve. When the gasoline level drops to one gallon, the valve automatically cuts off the feed to the carburetor. A sure warning. Motorist then opens valve and runs to nearest garage on remaining gallon.

Price \$1.50



COOPER
DASH GASOLINE GAUGE

(For New Model Ford)

Here is the latest addition to the fast-selling Cooper Line. An automatic gauge installed on the dash that shows exactly how much gas there is left in the tank. Never fails. Nothing to get out of order. Floating bulb in gas tank mechanically operates indicator on dial, warning motorist of low gas supply. Always in sight, never out of order.

Every careful driver needs this gauge. Stock it—sell it. Every gauge you sell will bring in a full quota of new customers.

Price \$3.00

ORDER FROM YOUR JOBBER OR WRITE DIRECT TODAY

COOPER MANUFACTURING COMPANY, 429 First Ave., Marshalltown, Iowa.

Exclusive Sales Representative: THE FULTON CO., Milwaukee, Wis.

The
Cooper
CUT-OUT

LINCOLN BALLOON SHOCK ABSORBERS

**Popularity
That Brings
Greater Profits**

Lincoln advertising in the *Saturday Evening Post* tells the public of the quality, value and superiority of Lincoln Balloon Shock Absorbers—builds an ever increasing demand and brings greater sales and quicker profits for Lincoln dealers.

Lincoln dealers tie up with our national advertising by using the sales helps we furnish. Other dealers should investigate the Lincoln proposition. Write today—Now.

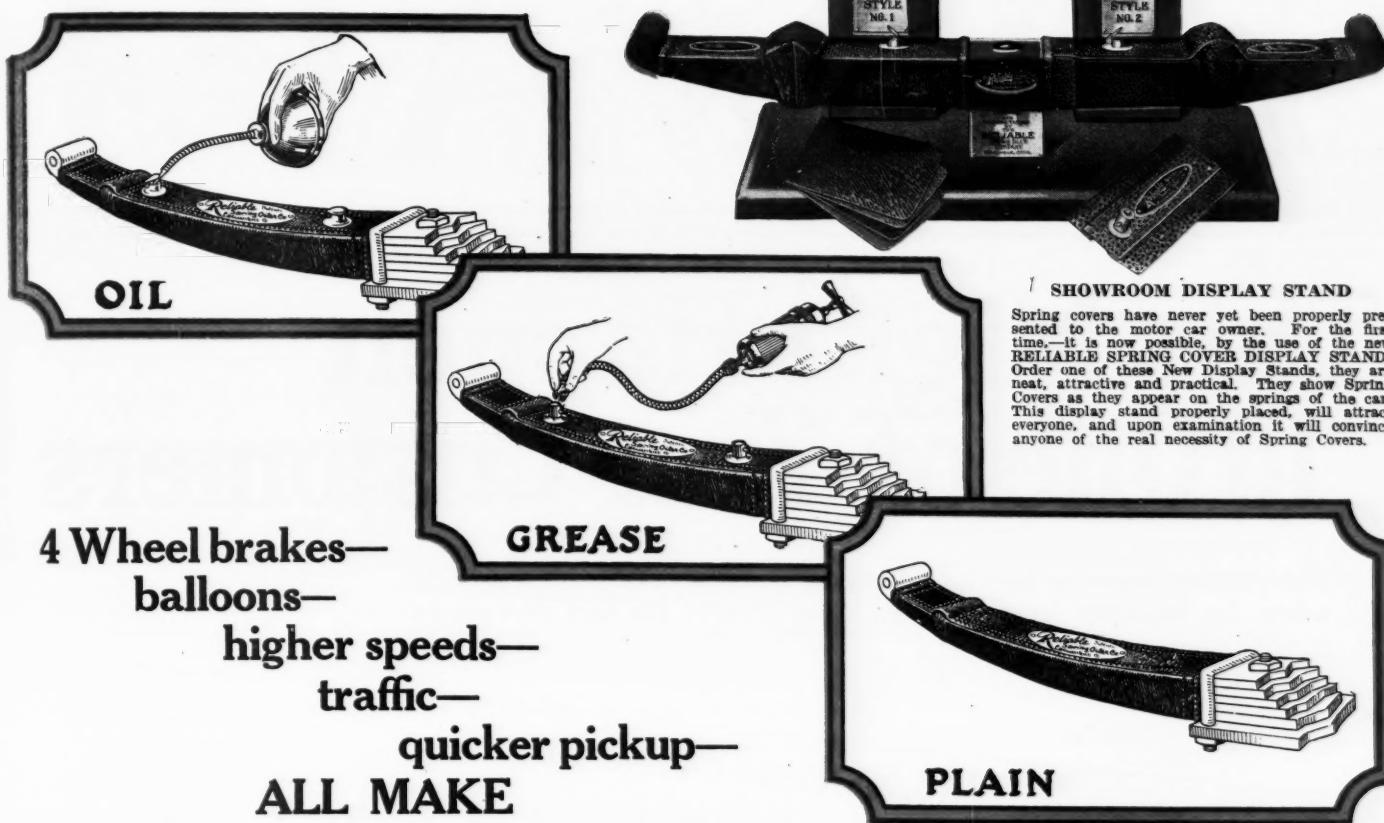
Lincoln Products Company
2649 N. Kildare Ave., Chicago, Ill.

Canadian Factory
Lincoln Products Company, Ltd.
Montreal, Canada



FEATURES OF LINCOLN SUPERIORITY

The exclusive oval shaped friction drum doubles the life of the inner springs. Other notable Lincoln features are lightning quick action; sturdy, simple construction; ease of installation, and freedom from constant servicing or adjusting.



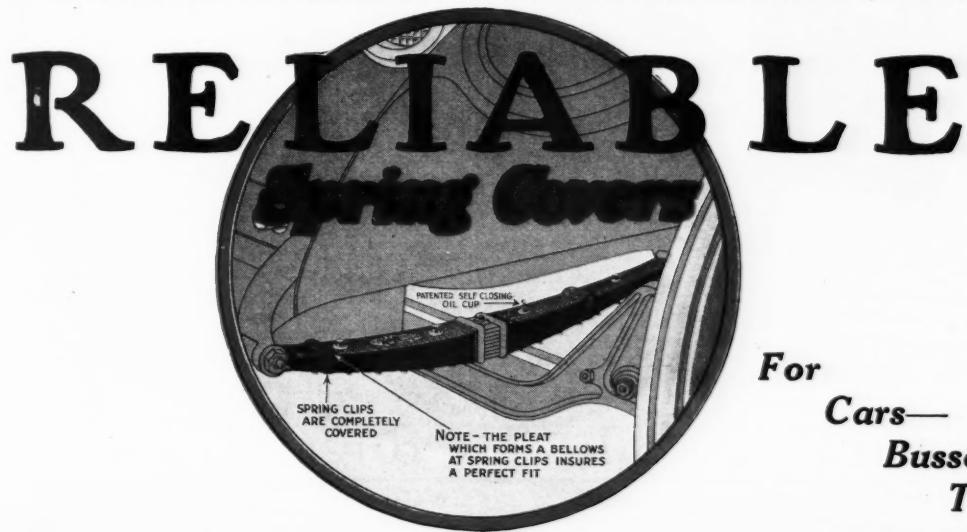
SPRING LUBRICATION and PROTECTION MORE NECESSARY THAN EVER!

Automobile and spring engineers of authority endorse and recommend the use of Reliable Spring Covers, for the protection and lubrication of the springs, in order to insure a PERMANENTLY quiet, smooth, easy riding car, the most essential qualification in the sale of today's motor car. Leading automobile distributors and dealers are equipping all of their cars with Reliable Spring Covers, including the price of same in the List Price of their automobiles. This idea has and is proving very practical and profitable. Its adoption is rapidly increasing. 1926 cars will see Spring Covers, the accepted mark of the properly equipped, well cared for motor car.

Automobile distributors and dealers who have not as yet

adopted Spring Covers as part of their regular equipment, are using the RELIABLE SPRING COVER DISPLAY STAND. Due to the sales obtained from same, it is proving a "Stepping-Stone" in convincing them of the true necessity of using Spring Covers as Standard Equipment. The use of Reliable Spring Covers not only makes you a handsome profit, but also saves you money, by eliminating 75% of your "Free Service." They make New Customers—They satisfy and retain your Old Customers. Why not profit by the experience of others. We not only guarantee TO MAKE YOU MONEY, BUT ALSO TO SAVE YOU MONEY. Write us today for descriptive literature and price lists.

THE RELIABLE SPRING OILER COMPANY, COLUMBUS, OHIO



For
Cars—
Busses—
Trucks—

STEWART

This Might Happen To One of Your Customers

The picture below is just one of many instances occurring every day where the Bumper must be relied upon to save life and prevent expensive damage to the car.

THE SATURDAY EVENING POST

May 15, 1926

STEWART-WARNER

An Important Campaign for Better Accessories

To Save a Life-To Save the Car-

It was too late for brakes. It was a matter of quick action—an impulse—no time to think.

The driver turned sharply to avoid hitting the little girl and ran smash into a post.

Ask the car dealer whether or not the brackets are steel. You expect bumpers to give you the fullest protection—to save your car and, if need be, save your life.

The vital parts of your car are in front. Practically 70% of its value is in the front end. Without ANY bumper—or with a ~~stainless~~ bumper—there is only a

Brackets of Steel

That Never Break

T W E L V E M I L L I O N P E O P L E A R E T O D A Y

jured the driver.

This might happen to any driver—any moment.

Put a Stewart-Warner Safety Bumper there to give these vital parts complete protection.

Spring

Shock Absorbers
Bumpers • Spotlights
Rear Fender Guards
Electric Horns
Windshield

STEWART-WARNER



"You can't make a silk purse out of a sow's ear"—neither can you make a bumper—that must take the brunt of the blow—out of "any old steel" for cross members and cast-iron for brackets.

That's why we are hammering home the fact to the millions of car owners—and prospective car buyers—that BRACKETS MUST BE OF STEEL and TO BEWARE OF CAST-IRON BRACKETS.

Your best bet as a dealer—is to sell accessories that "have the goods" in them—to give your customer what he expects for his money.

It isn't the mere "accessories" that he wants—

**IT'S WHAT THE ACCESSORIES
WILL DO FOR HIM**

The day of buying accessories to merely "doll up" the car, is past. It is actual necessity that prompts the purchase of these articles of equipment.

Sell the man accessories that you, YOURSELF, know honestly and actually, will stand by him in every emergency.

We can heartily recommend each and every one of the Stewart-Warner Family of Accessories as being of the highest character of dependability.

Sell Safety and you sell Satisfaction—then Success is yours!

STEWART-WARNER SPEEDOMETER CORPORATION
1826 DIVERSEY PARKWAY, CHICAGO, U. S. A.

A Complete Line of Better Accessories—

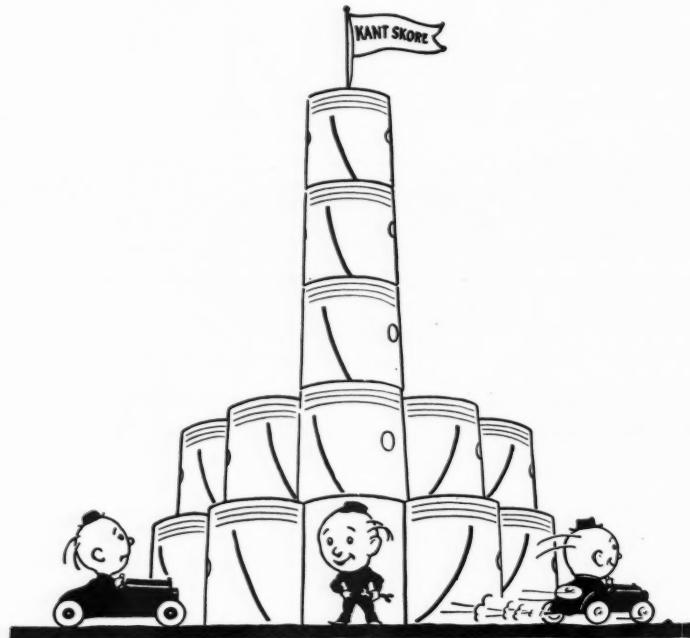
Shock Absorbers	Electric Windshield Cleaners
Bumpers	Rear Vision Mirrors
Rear Fender Guards	Speedometers
Spotlights	Heaters
Electric Horns	Vacuum Tanks

— AND —
Matched-Unit Radio



Stewart-Warner
SAFETY BUMPERS
Beauty and Protection

USING STEWART-WARNER PRODUCTS



Here's your chance for bigger, better business

Overhaul work is the most profitable part of your business. And the dealer who installs Kant-Skore Pistons will get the largest part of it in his community.

Kant-Skores are made of a special alloy. Their superior strength and wearing qualities are acknowledged.

But it's the Kant-Skore spiral slot that raises them out of their class—puts them ahead of every other pis-

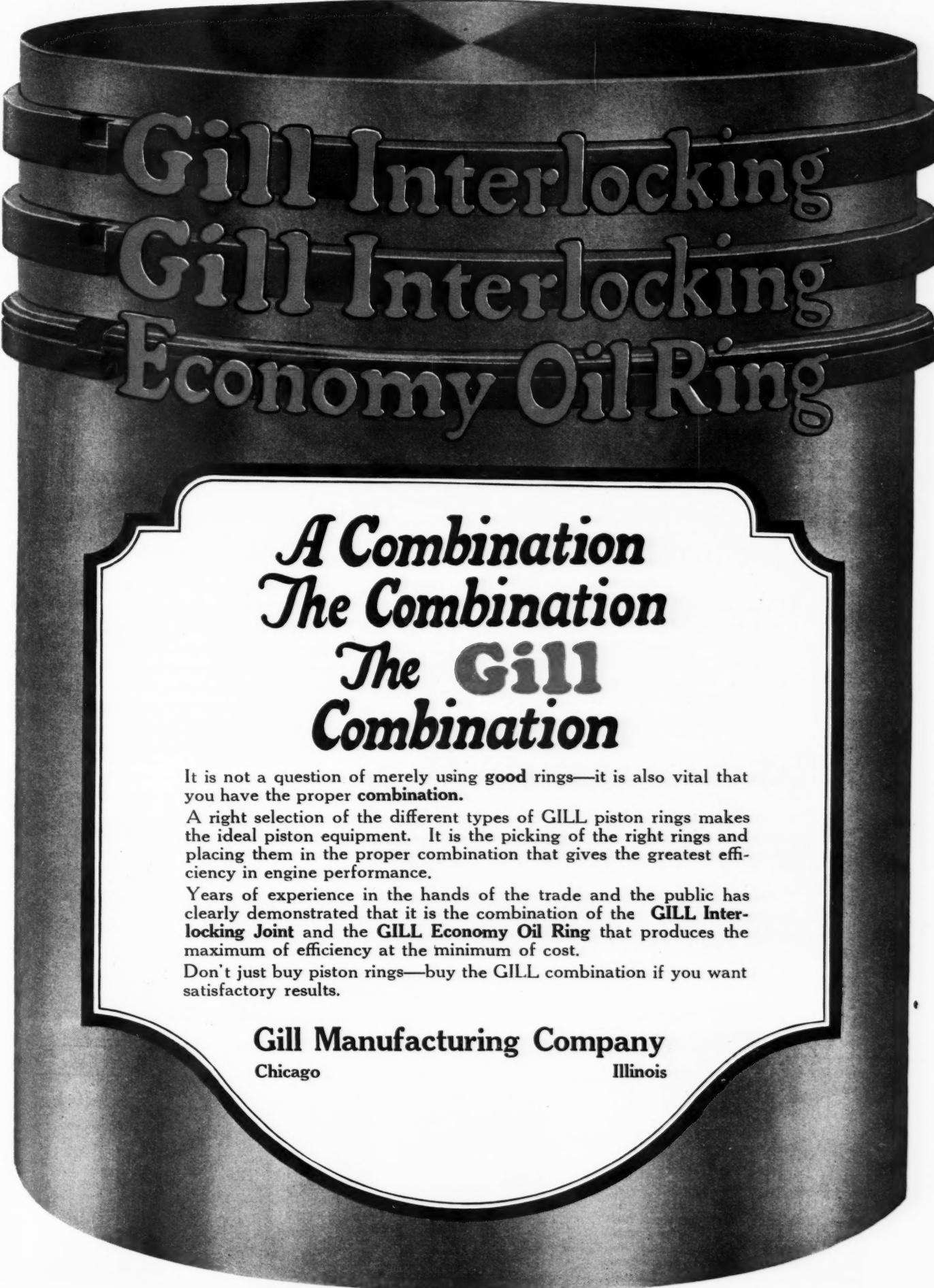
ton made. This spiral slot is an exclusive Kant-Skore feature. Because of it, Kant-Skores can be fitted tighter than any others—the slot absorbs expansion! No piston rattle, no lost compression—more power with less gas. A cooler, smoother-running motor is the result—one that satisfies the owner every time!

Specify Kant-Skores, and get in line for bigger overhaul profits. Your jobber has them.

* **THE KANT-SKORE PISTON COMPANY**
Cincinnati, Ohio, U. S. A.

* We will be glad to consider distributors' applications for desirable territory still open

Kant-Skore
 WEIGH
LIGHTEST PISTONS FIT
TIGHTEST



Gill Interlocking Gill Interlocking Economy Oil Ring

A Combination *The Combination* *The Gill* *Combination*

It is not a question of merely using **good** rings—it is also vital that you have the proper **combination**.

A right selection of the different types of **GILL** piston rings makes the ideal piston equipment. It is the picking of the right rings and placing them in the proper combination that gives the greatest efficiency in engine performance.

Years of experience in the hands of the trade and the public has clearly demonstrated that it is the combination of the **GILL Interlocking Joint** and the **GILL Economy Oil Ring** that produces the maximum of efficiency at the minimum of cost.

Don't just buy piston rings—buy the **GILL** combination if you want satisfactory results.

Gill Manufacturing Company

Chicago

Illinois

16,200,000 Fulton Sales Messages during first 7 Months of 1926

EVERY day, everywhere—in countless driving emergencies—the perfectly tuned four-note chord of the Fulton Aermore Horn courteously asks for and receives right-of-way. The "Signal with a Smile" is heeded.

Every year brings Fulton dealers thousands of added Aermore sales. Every Aermore sold makes a host of friends. Every friend won, wins other friends. But that isn't enough. More than 16,000,000 Fulton-Aermore sales messages will be broadcast through The Saturday Evening Post during the next few months. Fulton-Aermore recognition and prestige will be multiplied many fold. Fulton-Aermore sales will multiply proportionately. Reasons why it will be good business for you to stock and push Aermore Horns this year.

Five sizes; price complete with Valve and Hand Control:

Ford Special, 13 inch length	- - - - -	\$ 7
No. 1 15 inch length, for small cars	- - - - -	10
No. 0 17 inch length, for medium cars	- - - - -	12
No. 00 22 inch length, for large cars	- - - - -	14
No. 000 Extra deep tone Motor Bus Special	- - - - -	16

(Specify make and model of car when ordering)

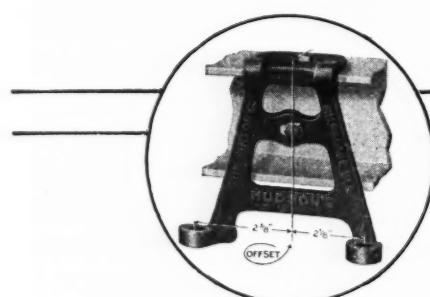


Counter Demonstrators That Make Sales!

This ingenious demonstrator invites the customer to sound the Aermore. A stroke of the plunger and Aermore speaks—delivers its full-toned, musical signal "that opens the road". The beautifully nickelized horn attracts the eye; the "signal" pleases the ear. This demonstrator is supplied without cost to dealers who stock Aermores. Ask your jobber's salesman about it.

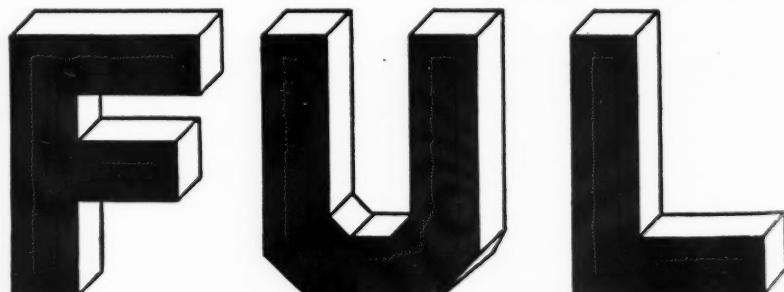


This neat, handy stand comes to you equipped with a new improved Fulton Accelerator and a Type D-26 Fulton (Perfection) Pedal Pad. It shows the position of these units in a Ford car and demonstrates their operation. Stand, fully equipped, furnished free with a reasonable order. Ask your jobber's salesman for details.



Hudson's Model B Crank Case Repair Arm Fits either side of any Ford crank case without drilling, filing, or forcing. Holds motor in original alignment. Quickly and easily installed. Better satisfied customers—more sales.

THE FULTON COMPANY, 732-75th Ave., Milwaukee, Wis.





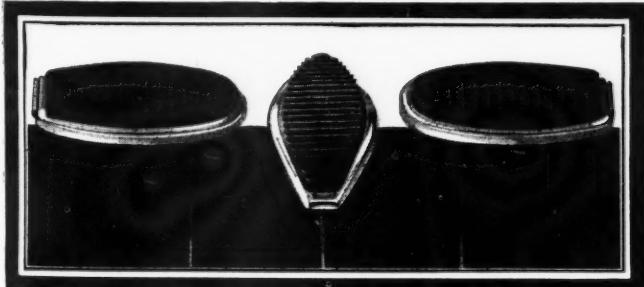
THE attractive advertisements illustrated above in miniature, appear in The Saturday Evening Post from February to July, inclusive—during the best selling season for accessories. Other ads will follow. While the Aermore Horn is featured in this campaign, other Fulton products are also attractively presented. This publicity is greatly stimulating the already active demand for Fulton (Perfection) Pedal Pads, Fulton Accelerator for Fords, and the other items featured here. For this reason, every month more dealers are finding it good business to carry the entire Fulton line.

Fulton (Perfection) Pedal Pads

These pads, encased in attractively nickelized frames, not only greatly improve the appearance of the pedals, but more important, contribute much to driving safety. The soft, live rubber corrugations grip the sole of the shoe—hold the foot firmly against the pedal, ready for any emergency. Put on in a jiffy—the customer can do it himself with a pair of pliers.

For Fords—type D-26 (fit 1926 models) set of 3, \$1.00. Type DX (For Fords previous to 1926,) set of 3, \$1.00. For other cars, set of 2, \$1.00.

They move fast at the low price of \$1.00.



THE FULTON COMPANY, 732-75th Ave., Milwaukee, Wis.

TON



Provides big-car control for Fords—plus the added advantage of a comfortable pedal that absorbs vibration and rests the foot. Direct action to carburetor provides smooth, flexible throttle control. Installation 5 inches to right of brake pedal assures maximum safety—reduces danger of stepping on brake and accelerator at same time. Nickelized pedal with genuine Fulton (Perfection) Pedal Pad. Installed in a few minutes.

A live seller at \$1.00.



An indispensable tool for garages, tire shops, service stations. The 4 sockets take all ordinary size rim nuts. Leverage can be instantly increased 300%, simply by throwing over the handle. High-carbon steel socket head turns easily. Socket head is copper-plated. Price, \$3.50.



(With apologies to OAKLAND)

Like OAKLAND, KEYSTONE Radiator Caps are "winning and holding good-will."

There enters into the manufacture of a fine Radiator Cap much of the care and organized effort that goes into a fine automobile.

The attractive KEYSTONE designs combined with the accepted and approved mechanical utilities and features have attained an enviable reputation.

Indeed, that is why more and more cars leave dealers' show rooms with the KEYSTONE mark of distinction, the ultimate in radiator dress. The familiar KEYSTONE Eagle and Eaglet

KEYSTONE
Senior

\$4.50

Models—the popular KEYSTONE Senior and Junior Models (plain, bar and ball types) and the distinctive KEYSTONE Senior and Junior De Luxe Models (with genuine Onyx balls) are all available in sizes to fit any car.

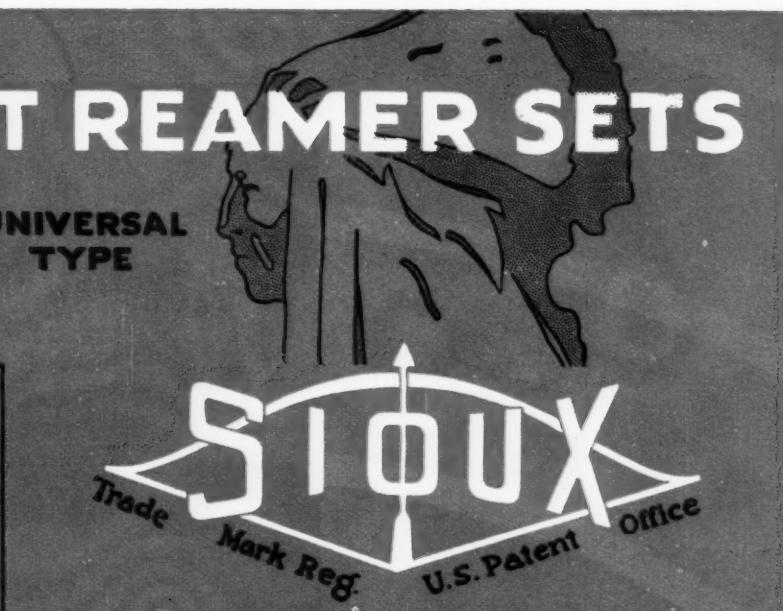
Ask Your Jobber About KEYSTONE Caps

THE NORLIPP COMPANY
568 West Congress Street - Chicago



Your Jobber will supply
this Display Stand

KEYSTONE
SELF-LOCKING
RADIATOR CAPS



Old Methods Must Go!

The NEW Sioux Reamers are so absolutely different and better—they do the work with such greater ease, smoothness and accuracy—that it doesn't pay to waste time and energy with old style reamers. The Nicked Tooth feature of Sioux 15° and 75° Reamers absolutely eliminates chattering. Sioux oversize pilot stems, for worn guide holes, prevent wobbling or traveling, insuring better work.

The handy sets shown here include 45° Roughing Reamers for removing hard carbon deposits, 45° Finishing Reamer, 15° and 75° Nicked Tooth Reamers for narrowing valve seats, pilot stems [including oversizes] and T handle.

No. 38 Set handles 90% of all motors.
No. 25 Set for all Fords and Fordsons, Chevrolet, Durant, Essex 6, Oakland, Oldsmobile "30" and Velie.

Your Jobber Sells Them

ALBERTSON & CO.

SIOUX CITY, IA.



The
Inspection We Give
Includes These Five
Important Points:

- 1—Testing each cell.
- 2—Replacing evaporation.
- 3—Cleaning terminals.
- 4—Cleaning top of battery.
- 5—Tightening hold-downs.

To Meet Every Emergency

No matter how dependable the battery, there will be times when emergencies create the need for prompt, reliable repairs. Our conveniently located service stations are maintained for this purpose—also to give 5-Point Service—and to sell the more reliable Willard Threaded Rubber Battery.

The
Willard Battery
men

We Service All Makes and Sell
Willards for All Cars—for Radio, too.

**Mr. W. O'Neil, Pres.
General Tire and Rubber Co.**

My Dear Sir:

I have never bought General Tires, yet I know that I have never bought any make with any degree of absolute confidence. Just read your advertisement, "You can't save rubber by using less of it," and you have sold me something—confidence. I intend to go to a General dealer and ask for all-around equipment and to pay its price with real satisfaction and pleasure.

**P. C. Jones,
Ocean View, Va.**

This is typical of the numerous endorsements from car owners, merchants and the press that followed the appearance of the advertisement reproduced on the following page. Car owners have their eyes wide open. Now more than ever true quality is the tire merchant's biggest asset.

You can't save rubber by using less of it

BY W. O'NEIL, PRESIDENT OF THE GENERAL
TIRE & RUBBER COMPANY, AKRON, OHIO

IN the news of the day practically every statement regarding rubber conservation supports the idea that rubber can be saved by using a few pounds less of it in a tire. This means substituting cheaper compounds, a growing practice that is not only short sighted but extravagantly wasteful. It is as fundamentally wrong as the subterfuge of putting sand in sugar or water in milk.

Putting shoddy or reclaimed rubber in tires does not save rubber. It reduces the cost of the tire several dollars but at the same time, by diluting the quality of the entire rubber structure, it takes out two-thirds of the wear.

This goes deeper than the tread rubber. It affects the quality throughout in the important rubber cushions that insulate and protect the costly fabric carcass. In addition

the blowing out of inner tubes must be considered. This means more trouble on the road and the buying of more tubes.

Such saving of a few pounds of rubber in making a tire gives the consumer a negligible cut in his initial tire cost but a greatly increasing running cost. Using three sets of tires and tubes to go the distance one set of the best quality will travel, certainly does not save rubber.

The way to conserve rubber is to use it in whatever generous quantities are required to manufacture a tire that lowers the owner's cost per mile by giving the longest possible wear.

A policy of building more miles into a tire does more for rubber conservation than any efforts to save rubber by using less of it.

*It's the second 10,000 miles
that makes the big hit.*



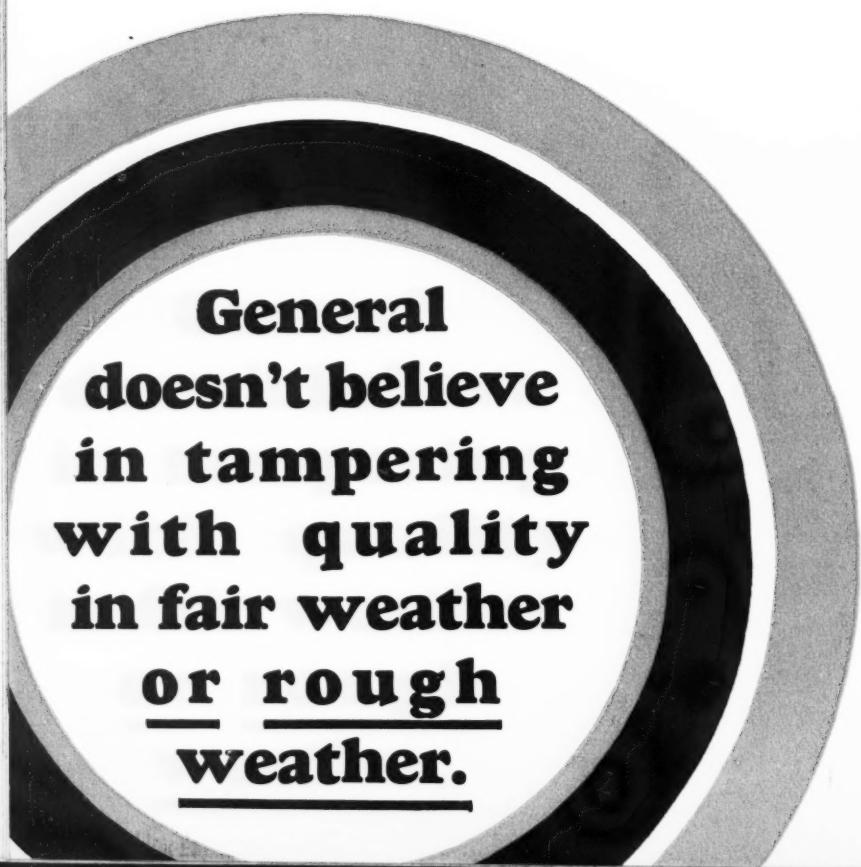
NOT AN OUNCE OF RECLAMED RUBBER USED IN THE GENERAL TIRE CARCASS OR TREAD

*This full page advertisement appears in The Saturday Evening Post,
The Literary Digest, Collier's and Forbes Magazine*

GENERAL BALLOON

**The value
of General distrib-
utors' tire stocks, as
well as their estab-
lished good-will, is
protected against
the backlash of
fluctuating
quality.**

6 PLY



**General
doesn't believe
in tampering
with quality
in fair weather
or rough
weather.**

ZENITH

You Can Now Supply Your Trade
with a

ZENITH

CARBURETOR

completely equipped, tested and with proper setting, for quick and easy installation on 86% of all registered cars. Each outfit comes carefully packed in an individual box with full installation instructions.

Auburn	\$17.00	Maxwell	\$14.90
Cadillac 51-57	37.50	Moon	17.00
Cadillac 59-61	60.00	Oakland 6-54	16.00
Chevrolet 490	12.50	Oldsmobile 1923-5	13.50
Chevrolet K	12.50	Oldsmobile 1926	17.60
Chrysler 4	14.90	Overland 4	13.50
Chrysler 6	30.00	Overland 6	14.00
Cleveland	16.75	Packard 116-126	38.00
Columbia	17.00	Packard Truck	50.00
Davis	17.00	Reo 6	21.50
Dodge	19.00	Reo Speed Wagon	15.00
Durant A-22	15.00	Star	16.55
Essex 6	22.50	Studebaker Light 6	13.50
Elcar	17.00	Studebaker Standard 6	14.50
Flint 40	15.00	Studebaker Special 6	28.50
Ford	9.50	Studebaker Big 6	30.55
Gardner 4	15.00	White G O & G N	27.50
Gray	14.50	White G K	27.10
Hudson	22.50	White G E C	31.50
Hudson Dual	57.50	White G M	29.50
Hupmobile R	13.50	White G A	29.00
Mack A B	37.50	Willys-Knight 4	19.00
Mack A C	40.00	Willys-Knight 6	21.00

The Zenith Carburetor gives the owner the same dependable carburetion that made possible the first trans-Continental, trans-Atlantic and trans-Pacific flights, the epoch-making "round the world" flight and many other notable achievements on the land, in the air and on the water. When human life hangs on dependable carburetion, the Zenith is chosen. *There is a Zenith for every make of car or truck.*

Write for special descriptive literature and dealer's proposition.

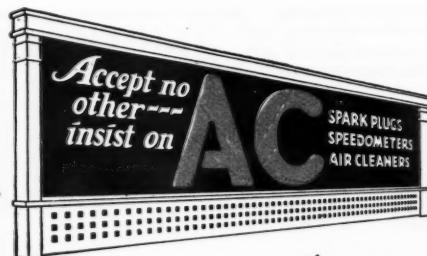
ZENITH-DETROIT CORPORATION

Branches:
NEW YORK
CLEVELAND
CHICAGO

Manufacturer of
ZENITH CARBUREATORS
Over 1200 Service Stations

MAIN OFFICE
and FACTORY
DETROIT
MICHIGAN

The well posted dealer concentrates his sales efforts on AC products.



He knows that the foremost automotive engineers specify AC products as standard equipment for the very good reason that they perform best. That is the reason for their assured market. Backed by strong advertising, they are sold to motorists without sales resistance. They carry a good margin of profit.

AC SPHINX
Birmingham
ENGLAND

AC Spark Plug Company, FLINT, Michigan
Makers of AC Spark Plugs—AC Speedometers—AC Air Cleaners

AC-OLEO
Levallois-Perret
FRANCE

AC SPARK PLUGS

THE new AC Spark Plug marks the greatest advance made in spark plug construction in years.

A new design, a new alloy for sparking points, a new electrically fused Kyanite insulator core and a new glaze—in a type and size for every motor.

For Fords there is the famous AC 075, embodying the above improvements as well as many other special features—and it is now made in both one- and two-piece design.

AC SPEEDOMETERS

THE AC Speedometer for Fords is of the same high quality as furnished for original factory equipment to the manufacturers of Buick, Cadillac, Chandler, Chevrolet, Chrysler, Gray, Oakland, Oldsmobile, Peerless, Pontiac and GMC Trucks.

There is no swivel joint between the front wheel and the instrument—it drives direct—exclusively an AC feature, insuring continuously satisfactory service.

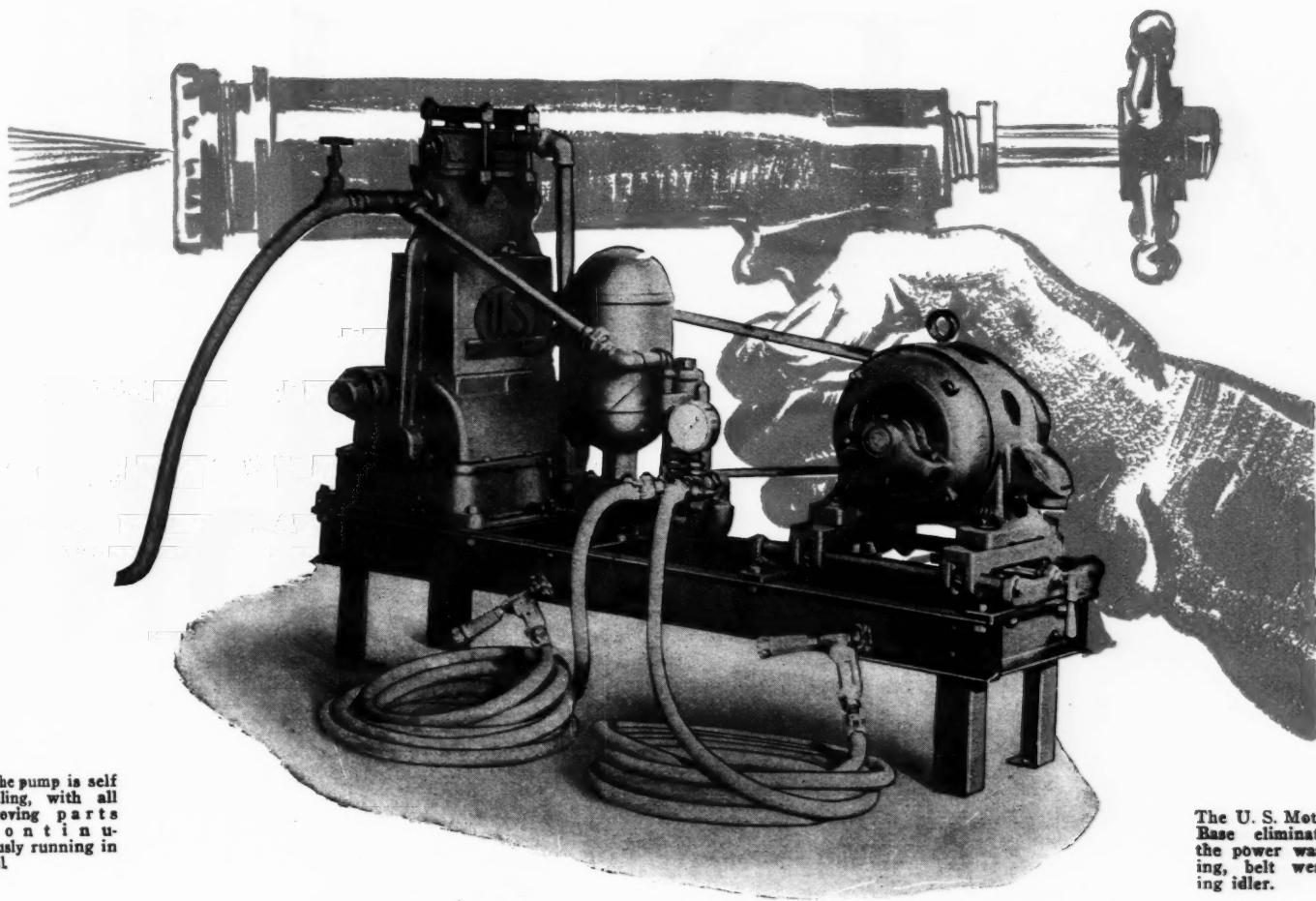
Packed complete with all installation attachments, easily mounted and reasonably priced.

AC AIR CLEANERS

THE AC Air Cleaner prevents dust from entering the motor through the air intake of the carburetor, thereby eliminating excessive wear on the motor's moving parts.

Original factory equipment on Buick, Davis, Locomobile "Jr. 8", Oakland, Nash, Stutz and Willys-Knight "6"—Models available for installation on Chevrolet, Chrysler 4, Dodge Brothers, Ford, Maxwell, Oldsmobile, Studebaker, as well as the 1925 and earlier models of Buick, Nash and Oakland.

Packed complete with all installation attachments, easily mounted and reasonably priced.



The pump is self oiling, with all moving parts continuously running in oil.

The U. S. Motor Base eliminates the power wasting, belt wearing idler.

THE SENSATION OF 1926— U. S. Car Washing System!

The washing of cars by the U. S. system is a comparatively late development, but the results to be derived are very surprising as to the saving in labor and the rapidity with which the work can be done. In other words, this improved method of washing automobiles can now be made a profitable department of your business in place of a loss, at the same time eliminating the customary grief and producing more prompt service to your trade.

The U. S. Car Washing unit is not a compressed air outfit, furnishing only 90 to 150 pounds pressure, but a sturdily constructed unit, designed to furnish 300 pounds pressure or a soft mist without injury to the finish of the most luxurious car.

The specially designed U. S. Pistol Grip gun is easily operated with one hand from any angle, permitting operator to use his other hand for holding the hose, which assures convenient change of position.

The United States Air Compressor Company
5304 Harvard Avenue Cleveland, Ohio

Manufacturers of U. S. Air Compressors; Complete Paint Spray Units and Car Washing Equipments.

The United States Air Compressor Co.
5304 Harvard Ave.
Cleveland, O.

Send me your latest bulletin on car washing.

Name _____

Street _____

City _____

Interested in
(please check) 2-gun equipment
4-gun equipment

M.A.-4-15

U.S. CAR WASHING EQUIPMENT

U.S.

"The U. S. Equipment Behind the Gun!"

A Double *with a* Double



OAKLAND SIX

WINNING AND HOLDING GOOD WILL



Franchise Market

Generous profits follow on the heels of great opportunities. And opportunities were never better than today, in the fast expanding market for low-priced Sixes.

To win maximum sales and profits from this rich field, the Oakland-Pontiac Double-Profit Franchise provides two Sixes, each setting a new measure of value in its price class — and each commanding the enthusiastic interest of a great group of motor car buyers.

Remarkable increases in sales have doubled the business of Oakland dealers in a few short months. Here is a ready made, immediate source of profitable business.

Add to this established Oakland line the new Pontiac Six with qualities of beauty, comfort, roominess, performance and stamina that are amazing in such a low-priced car (\$825 for Fisher-built coach or coupe) and you can readily understand why even old, well-established automobile merchants are inquiring closely into the double-profit possibilities of this new Oakland-Pontiac Franchise.

The Oakland-Pontiac Double Franchise provides eight new open and closed body types with a price range of \$825 to \$1295.

OAKLAND MOTOR CAR COMPANY • PONTIAC, MICHIGAN

PONTIAC SIX

CHIEF OF THE SIXES



Thermoid
Brake Lining
Service

What Reductions in Consumer List Prices Mean to the Trade

TWENTY years ago Thermoid originated a standard price list which soon became the standard not only for Thermoid, but for all makes of brake lining. Under this standard list it was possible to charge the car owner the same price for brake linings regardless of quality—to the detriment of those who desire to make, sell or install a first quality product.

In order to clarify this unfortunate situation, it became necessary for Thermoid again to do some pioneer work. The result is the new Thermoid List Prices to the Car Owner—showing a *37 per cent.* list price reduction on Thermoid *Hydraulic Compressed* and a *50 per cent.* list price reduction on Thermoid *Interwoven Lining*. Thus it is possible to offer the finest brake linings made, at tremendously lower list prices—and at the same time make a good profit.

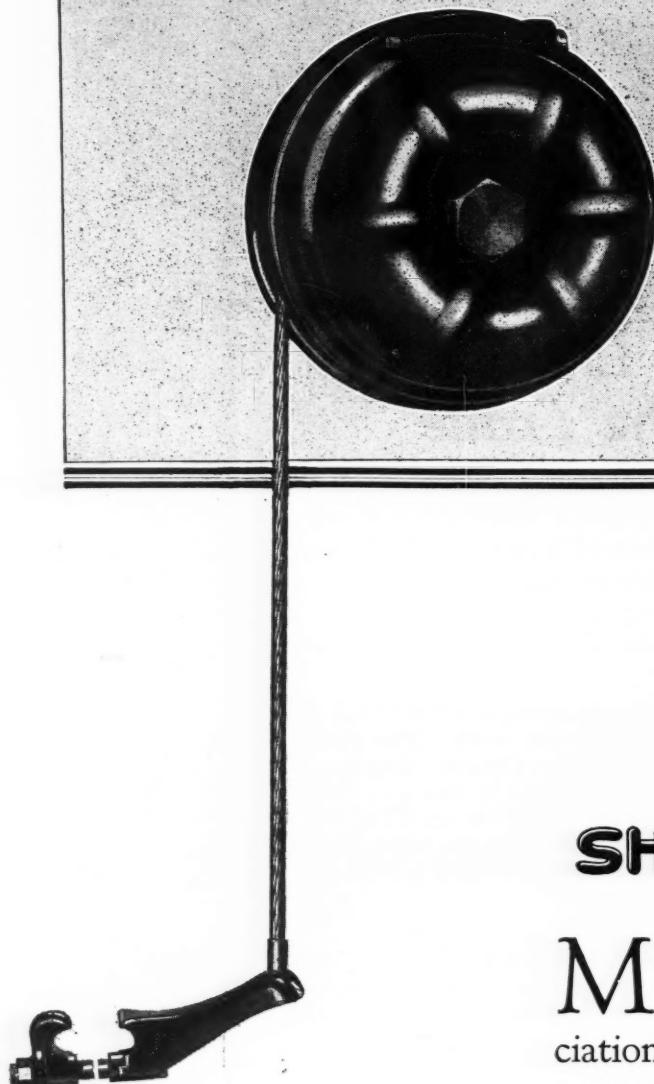
Already leaders in the trade tell us they are feeling the favorable effects of the new lists in terms of increased sales. Why shouldn't they? It is now possible for the garageman to offer his customer a greatly superior lining at a less cost than the list price of inferior products. With the broadcasting of the new lists to the motoring public that increase will grow. This broadcasting is being accomplished through a list of national publications headed by such great mediums as *The Saturday Evening Post*, *Collier's* and *Liberty*, with a combined circulation of more than 5,000,000 and reaching a reading public of over 20,000,000. The first advertisement appears in *The Saturday Evening Post*, April 24th. Watch for it.

Make your shop a Thermoid Service Station and stamp it as a "Quality and Fair Price" shop.

THERMOID RUBBER COMPANY
Factories and Main Offices
TRENTON, N. J.

*Makers of Thermoid and Rexoid Transmission Lining, Thermoid
Hardy Universal Joints, Thermoid Radiator Hose
and Mechanical Rubber Goods*

Hydraulic Compressed
Brake Lining
"For short stops and long service"



Keep Your Seat /

with

BURD GILMAN **SHOCK ABSORBERS**

MOTORISTS buy insurance against theft, fire, collision—why not against depreciation? Burd-Gilman Shock Absorbers give that protection—with comfort and safety added.

Motor car and accessory dealers who are most interested in customer-satisfaction are selling Burd-Gilmans. Write today for information, literature, and trade discounts.



BURD HIGH COMPRESSION RING CO.
Makers of the Famous Burd Piston Rings
ROCKFORD, ILLINOIS

THE ORIGINAL SNUBBING DEVICE WITH THE STEEL CABLE

DUCO POLISH No. 7



HERE'S a big profit maker! A nationally advertised auto polish—made especially for Duco by the makers of Duco.

Leading car manufacturers recommend it—many of them put sample cans of this polish in all the cars they ship.

Three million Duco-finished cars now in use—35 manufacturers turning out thousands of new Duco-finished cars every day. What a market!

You don't have to "sell" Duco Polish No. 7. The public know that the chemists who developed Duco know exactly

what to make for cleaning and polishing Duco.

Easy sales—quick turnover—big profits. That's what "No. 7" gives you, so order your stock TODAY.

DUCO POLISH No. 7 is a cleaner and polish combined. It is equally good for Duco, lacquer or baked enamel finishes. Quickly removes "Traffic Film" and restores the original beauty and lustre of Duco. Gives a hard dry polish. Leaves no oily film to catch and hold dust. Easy to use. Simply apply with soft cloth, and rub.

Put up in beautifully lithographed cans

Pints \$1.00 Quarts \$1.50
Gallons \$4.25

Packed in cartons of 24 pints or 12 quarts.
Gallons packed 12 to the case.

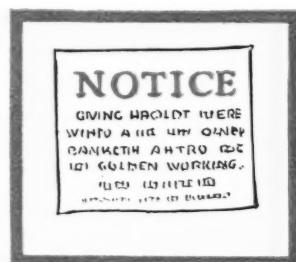


The du Pont unit containers make
repacking unnecessary

7 Reasons Why You Should Sell DUCO POLISH No. 7



1 Sample Cans are placed in the tool boxes of Duco-finished cars before they leave the factories.

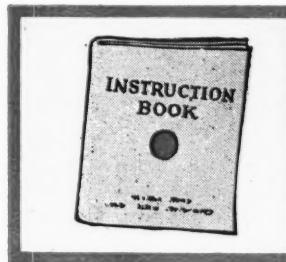


2 Windshield Stickers which recommend Duco Polish No. 7 are placed on Duco-finished cars at the factories.



3 Service Bulletins, advising the use of Duco Polish No. 7, have been sent by car manufacturers to their dealers everywhere.

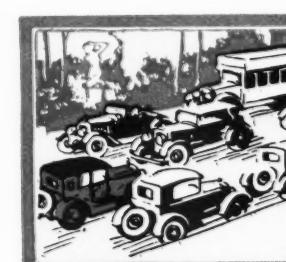
4 Instruction Books and sales literature issued by many car manufacturers now instruct owners to use Duco Polish No. 7.



5 Advertising—Duco Polish No. 7 is widely advertised in The Saturday Evening Post and other leading magazines.



6 **3** Million Cars now in use are Duco-finished. These popular cars are finished with Duco—Ajax, Buick, Cadillac, Chandler, Chevrolet, Chrysler, Cleveland, Dodge, Diana, Franklin, Hupmobile, Oakland, Oldsmobile, Packard, Paige, Pontiac, Marmon, Moon, Nash, Stutz, Velie, Kissel, Yellow Cab, Premier, Hertz, Davis, Rolls-Royce, Daimler, Kleiber, McFarlan, etc.



7 Specifically for Duco—No. 7 is especially made for Duco, and is the only polish endorsed by du Pont, the makers of Duco.



MAIL THIS COUPON TODAY

E. I. du Pont de Nemours & Co., Inc.
3500 Gray's Ferry Rd., Phila., Pa. Date.....

Ship me..... Cartons of Pints (24 pints each)
..... Cartons of Quarts (12 quarts each)

of Duco Polish No. 7, and bill at dealer's prices.

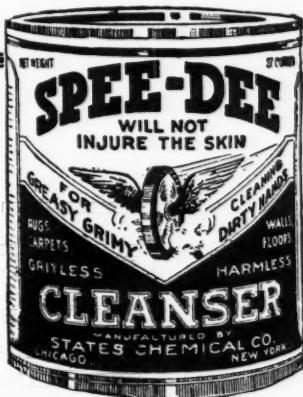
Firm.....

St. Address.....

City..... State.....

Additional information supplied by
E. I. DU PONT DE NEMOURS & CO.
Incorporated
3500 GRAY'S FERRY ROAD
PHILADELPHIA, PA.

PRINTED IN U.S.A.



Cleans Up Profits

That's what **you** want to know. It cleans up profits—and they're worth having, too.

SPEE-DEE moves fast through stock. It has a quick turnover on account of buyers coming back for more. That counts. It means a steady income.

And SPEE-DEE has so many uses that it sells to everybody. You even use it yourself in your own shop, and make it pay.

It always cleans up profits.



Here's the counter or window display we furnish free. It helps you sell SPEE-DEE faster and oftener.

States Chemical Co.
703 W. Fulton St.
CHICAGO

Mail the Coupon Now!

and Dirt!

—and dirt! What SPEE-DEE does to dirt!

Without a drop of water it removes grease, dirt, stains and other grime like magic. It actually softens the skin, healing chapped or sore hands. Indispensable in the shop, or for use after making roadside adjustments or repairs. Also good for cleaning spots and stains from clothes, rugs, upholstery, paint or enamel. Leaves no rings. An all 'round serviceable cleaner that sells.

This Special Offer Is for a Limited Time. Let's Go!

Here's how we propose to make it worth your while to get acquainted with SPEE-DEE. On your first order for one dozen cans—the big ones, containing 27 oz.—we will include FREE an extra 1/6 of a dozen. On the sale of these 14 cans your net profit will be over 43%! That's some return on a product that lists for 35c.

Use the coupon, and get your order in today. The season has started. Let's go!

States Chemical Co.,
703 W. Fulton St.,
Chicago, Ill.

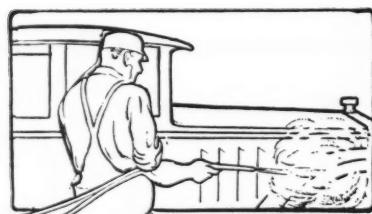
Ship us through our jobber or direct dozen SPEE-DEE at \$2.75 per dozen. Include 2 cans free with each dozen, new 5-color Art Paint Poster and circulars.

Our Jobber is

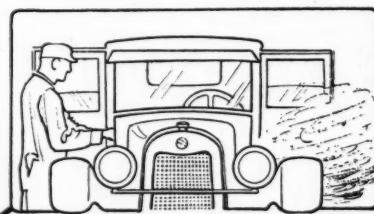
Signed

Address

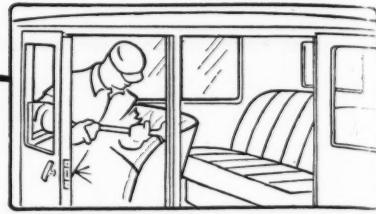
City State



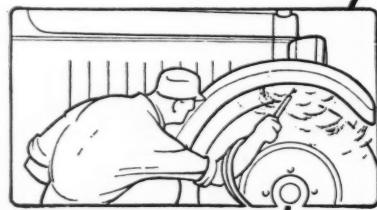
1 Wash cars quickly, easily and harmlessly. Mist used full force for chassis can be modified for body.



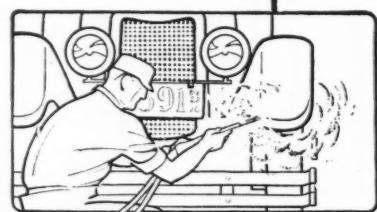
5 Blow dirt and grime from the interior of car with compressed air.



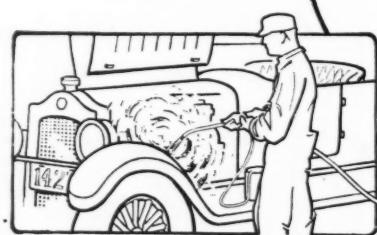
6 Vacuum clean carpets and upholstery with Curtis Vacuum Cleaning attachment. (Supplied at small additional cost).



2 Reach and clean inaccessible places not reached by the old hand method.

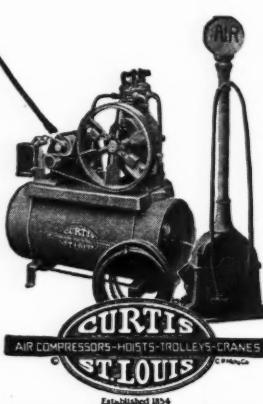


3 Apply hot or cold soap- or solution vapor under air pressure.



4 Clean motors with engine cleaning liquid under air pressure.

The AIR-MIST is made by the manufacturers of the popular Curtis Compressors for tire inflation lines, which with Curtis Column Type and Low Type Air Stands, are practically standard in the automotive industry.

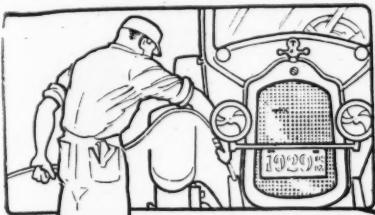


Bid good-bye to slow tedious hand-washing. Here at last is a rapid car-wash system which will not injure the finest finish. The Curtis AIR-MIST with water amplifier atomizes every drop of water into tiny particles, cushions each particle with a shock-absorbing coat of air, and throws these cushioned particles forcibly against every part of the car—into every nook and cranny! This penetrates and soaks off all grit and grime in a jiffy. Then every hard-to-get-at place is thoroughly dried by air, the car is polished and turned out *complete* in less time than by other methods.

In some systems where attempts are made at atomization, the mixing of the air and water is incomplete. The atomization can not be maintained throughout the system and therefore, instead of a steady mist,

You Can Do All These Only with

Curtis **AIR MIST** **CAR**
WASH
~ with water



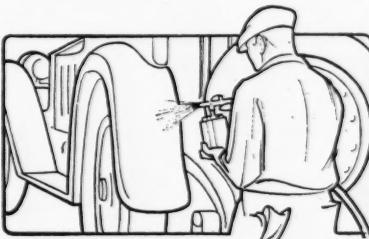
7 Dry out, with air, nooks and crannies and inaccessible places where rust would gather.



8 Apply polish, with air, before car is dry; wipe it off with a rag. No chamois. Save labor, and cost of chamois.



9 Provide air for tire inflation without a separate compressor.

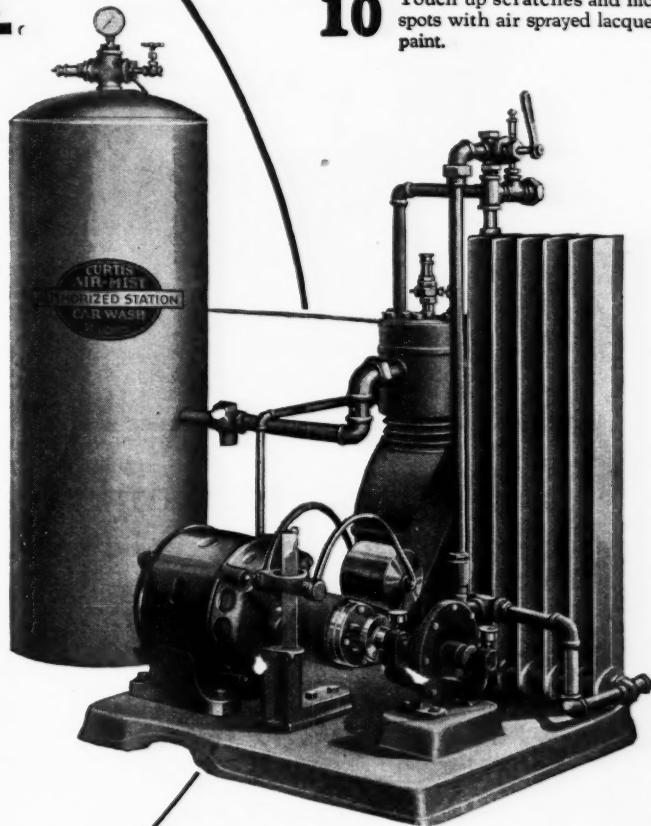


10 Touch up scratches and nicked spots with air sprayed lacquer or paint.

Things *the "AIRMIST"*

these devices shoot alternate slugs of air and water—a veritable bombardment of water "bullets," fully as injurious as the high-pressure solid-water systems. The effect on a fine surface is the same as if a fire hose had been used.

Don't put up with low-profit hand-washing any longer. Don't take a chance on losing your customers by installing a system that may ruin the car's finish. Let us prove to you that car washing can be made a quick, easy and profitable operation. Get the new free AIR-MIST catalog. The coupon below will bring it to you. Fill it out and mail it in today.



Sign and
send today!

COUPON

CURTIS PNEUMATIC MACHINERY CO.
1957 Kienlen Avenue, St. Louis, Mo.
Branch Office: 518-U Hudson Terminal, New York

Please send me without obligation, your new free AIR-MIST Catalog.

Name.....

Address.....

City..... State.....

Jobber's Name.....

SYSTEM *amplifier*



Sell "Class" in Bumpers

That's what you sell when you sell McKay Red Bead Bumpers—the bumpers that not only add "class" to the car but protect the "class" that's built into the car.

McKay means "buy" to the motorist and "sell" to the dealer.

UNITED STATES CHAIN & FORGING CO.
Union Trust Building, Pittsburgh, Pa.

MCKAY RED BEAD BUMPERS

MCK

McKay Tire Chains are rapidly becoming a part of every motorist's regular equipment. Dealers' summer sales prove it.





Van Asks:

"Is GILMER a good name to tie to? Ask the men who are making the most money in this line."



They Really Are "SUPER-SERVICE"

—because they are of the staunchest moulded rubber cord type construction

IF you could walk through the Gilmer Plant and see SUPER-SERVICE Fan Belts being made, you would realize beyond all doubt why they give such abnormally good service. The Gilmer method of combining heavy cords with the purest rubber is a positive assurance of longer life and greater satisfaction.

Gilmer SUPER-SERVICE Fan Belts are actually easier for a dealer to sell because their *extra quality* shows right in the belts themselves. Then, too, the motoring public *knows* the Gilmer reputation and nine times out of ten is willing to buy merely upon seeing the Gilmer name on the distinctive orange and white package.

That is wonderful GOOD WILL to cash in on!

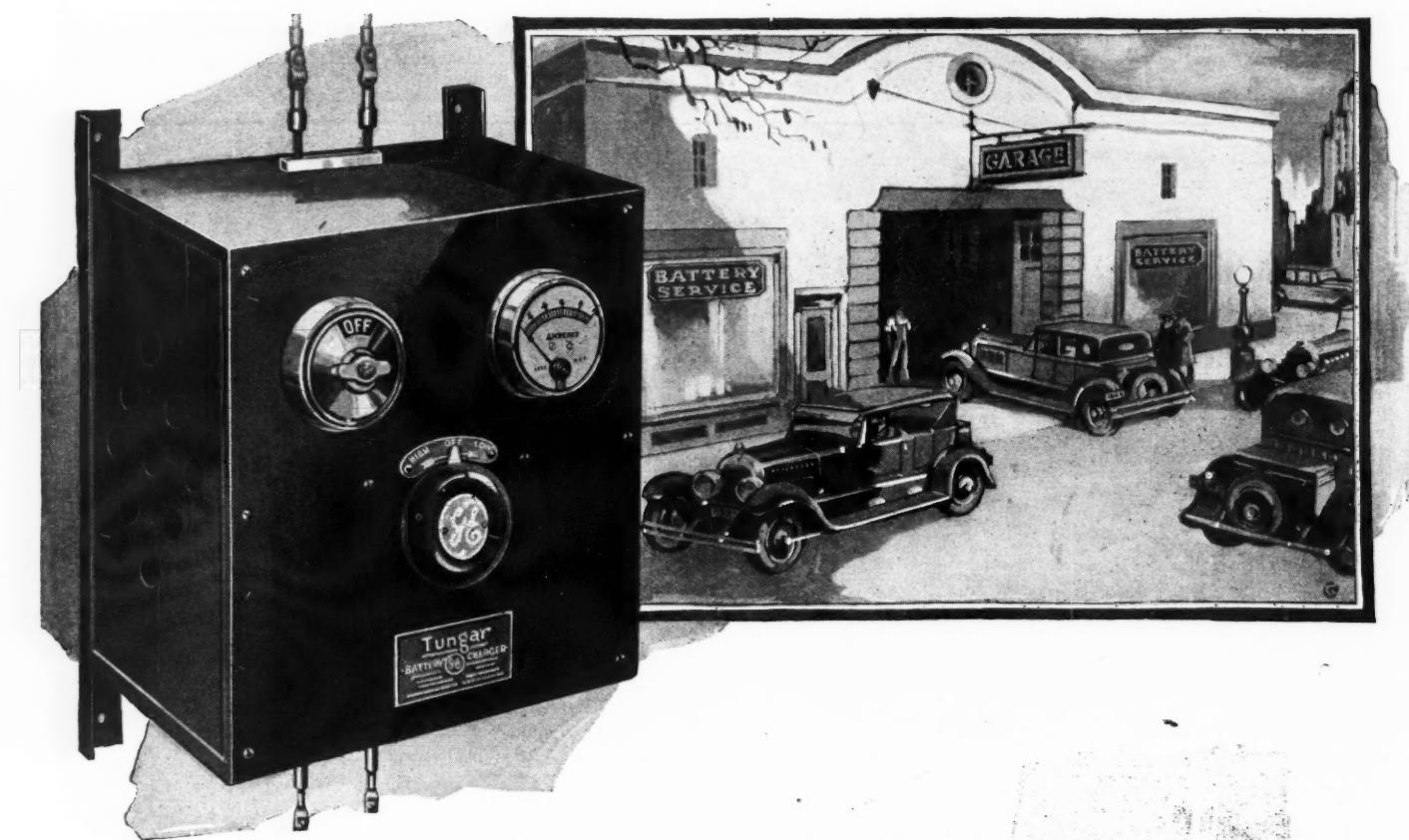
L. H. GILMER COMPANY
Tacony, Philadelphia, Pa.



Here is the practical Gilmer Fan Belt Display Cabinet that you can obtain without cost. Ask your jobber about it.

gilmer

**Makers of the World's
Best Known Fan Belts**



Bring in more business

For the garage, the auto service station, the car dealer—a Tungar means added profits. It means complete service right on the premises. And it means extra income from a small unused bit of wall space.

For the service station, a Tungar means low first cost, low running cost, twenty-four hour service. A Tungar works safely all night, with no attention. It is the *original* bulb charger that made battery charging profitable.



Write for the booklet that shows the profit possibilities of the Tungar.

HEAVY DUTY
Tungar
 REG. U.S. PAT. OFF.
 BATTERY CHARGER

Tungar—a registered trademark—is found only on the genuine. Look for it on the name plate.

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY

MERCHANDISE DEPARTMENT

BRIDGEPORT, CONNECTICUT

adding thousands of new buyers
to our potential market

PIERCE-ARROW

now offers

The First Complete Line of CUSTOM-BUILT COACHES



Custom-built COACH Bodies

5-Passenger, 2-Door Coach	\$3150
5-Passenger, 4-Door Coach	\$3250
7-Passenger, 4-Door Coach	\$3350
7-Passenger, 4-Door Limousine-Coach .	\$3450

Custom-built De Luxe Bodies

4-Passenger Coupe . \$3695	5-Passenger Sedan . \$3895
7-Passenger Sedan . \$3995	7-Passenger Enclosed
Runabout \$2895	Drive Limousine . \$4045
4-Passenger Touring \$3095	7-Passenger Touring \$2895

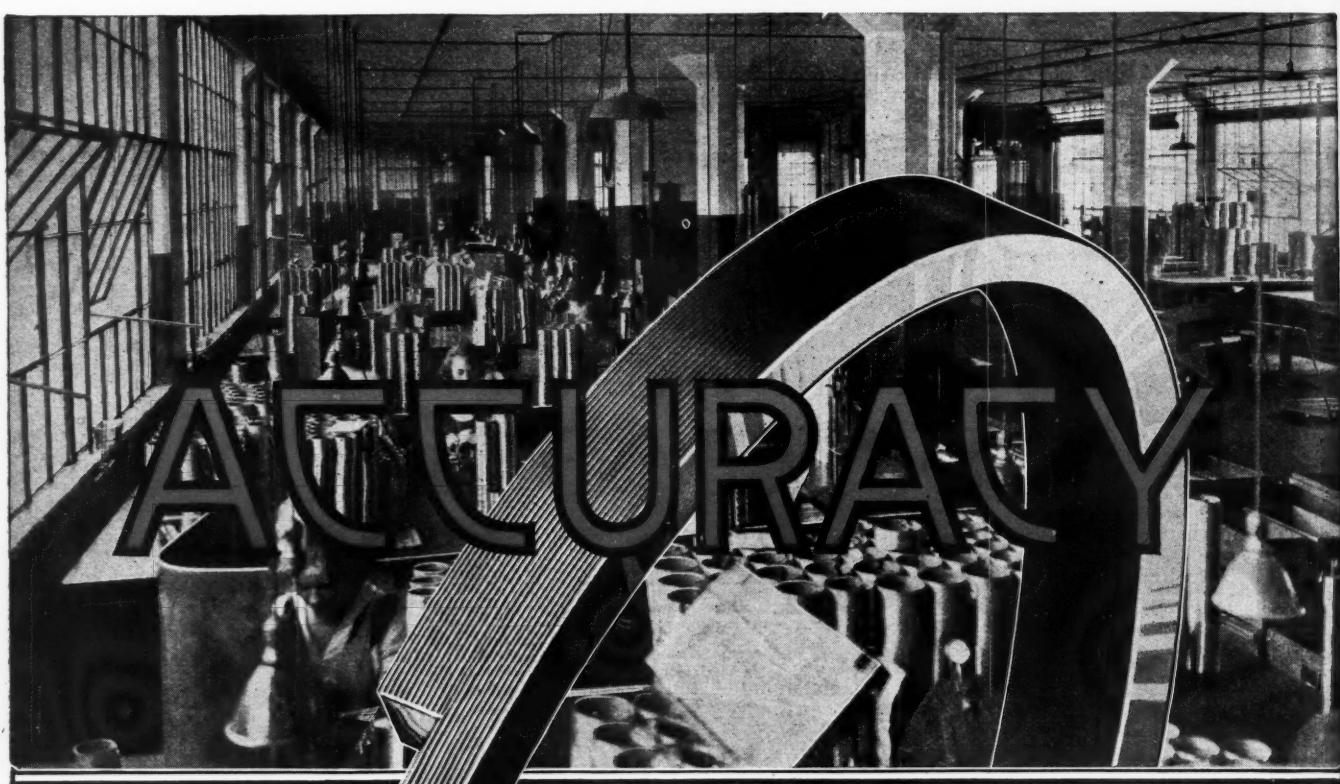
All prices are quoted f. o. b. Buffalo, N. Y., reduced tax extra

The complete line of Custom-built Coaches automatically adds thousands more buyers to our potential market. In addition, the Pierce-Arrow dealer has the seven beautiful, Custom-built De Luxe Bodies of the Series 80 line, the larger Series 33 models, the Dual-Valve Motor Trucks and the Pierce-Arrow Six-Cylinder Bus. There are now splendid opportunities in many desirable buying centers. Would you like to know about your territory? Write or wire us about it.

THE PIERCE-ARROW MOTOR CAR COMPANY

Buffalo, N. Y.

The Pierce-Arrow Finance Corporation offers dealers complete financing and insurance service on both new and used vehicles, at low rates



QUALITY Brand PISTON RINGS

All oversizes are clearly stamped in each ring, and every QUALITY Brand Ring is finished to the highest degree of practical accuracy.

The purchaser need not recheck with micrometer or gauge. The stamped trade name and oversize guarantees the ring has passed all of our various rigid inspections including a final rechecking inspection in the Department shown above.

This dependable QUALITY marking on each ring insures quick and positive identification and simplifies stock handling.

The Piston
RING COMPANY
Muskegon, Michigan

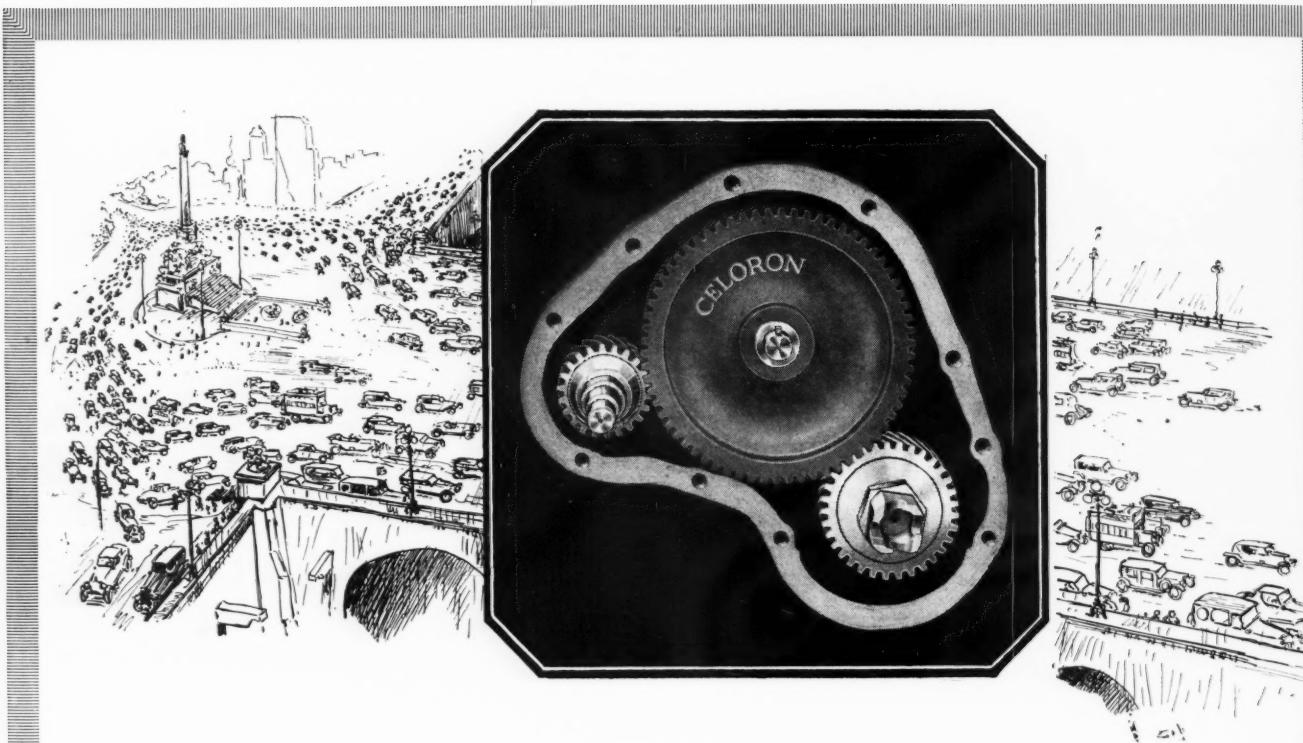
S I L E N T

CELORON has become a symbol
for silence wherever motor cars
are driven.

Already, the noisy front-ends which
have been hushed by Celoron Timing
Gears are numbered by the millions.
The vast facilities and resources of the
plants in which Celoron Timing Gears
are made, are dedicated to your service
in silencing other millions.

DIAMOND STATE FIBRE CO.,
BRIDGEPORT, PA., PLANT

CELORON
TIMING GEARS



The appealing thing about CELORON Timing Gears

to the repair shop and service station owner, is the fact that years of experience have confirmed his faith in their absolute dependability.

Accurately cut and of uniform excellence, they have saved him time and labor and gained customer good will.

Added to these advantages is quick delivery. Adequate stocks are carried in practically every automotive jobbing center in the United States by the members of the National Automotive Parts Association.

If you do not have a Celoron Silent Timing Gear List showing sizes required for different makes of cars, write for your copy.

*Celoron Timing Gears,
Non-metallic and
resilient:—*

- 1—Eliminate metal-to-metal contact
- 2—Silent at all speeds
- 3—Stay silent permanently
- 4—Save every part of the timing mechanism from the effects of vibration and shock
- 5—Prolong the life of shaft bearings
- 6—Accurately cut, they keep timing accurate
- 7—Maintain gas and oil economy
- 8—Prevent tear-downs
- 9—Grease-proof, oil-proof, waterproof
- 10—Will not warp or swell

Diamond State Fibre Company

BRIDGEPORT, PENNSYLVANIA

PARIS, FRANCE

CHICAGO, ILLINOIS

LONDON, ENGLAND

Diamond State Fibre Co. of Canada, Ltd., Toronto, Canada



Rie Nie
Trade Mark Reg.

FAN BELTS

THE REPEAT SALES—
to motorists, dealers and jobbers of *Rie Nie* Fan Belts, and of each *Rie Nie* Automotive Product, is a glowing tribute to the service and performance rendered by these meritorious products.

The quality of the materials entering into the manufacture of *Rie Nie* Fan Belts is responsible in no small degree for the unusual satisfaction derived by motorists using them. Carefully tested in our laboratory, every substance entering into a *Rie Nie* Product must measure up to a rigid standard of quality. Then manufactured with scientific accuracy and mathematical precision.

The result is a characteristic *Rie Nie* Automotive Product that meets the definite need of the motorist to a degree far beyond the motorist's expectation—based upon his experience with ordinary products.

It is an entirely natural and inevitable condition that *Rie Nie* Fan Belts are repeatedly bought by motorists who have once used them.

This fact insures dealers of "REPEAT" sales; substantial sales through increased volume; and bigger profits by reason of larger volume.

Rie Nie Fan Belts carry a substantial profit per sale for the dealer, and a satisfactory margin for the jobber—yet are priced to the motorist quite reasonably.

Dealers will find *Rie Nie* Fan Belts, and every *Rie Nie* Product, mighty good sellers which repeat steadily and surely—and which back up in every sense of the word the dealer's reputation for handling the highest quality of merchandise for his trade.

Specialize in *Rie Nie* Fan Belts—recommend them! They are made and guaranteed by a company financially responsible—established since 1910.

DURKEE-STWOOD CO.
MINNEAPOLIS, MINN. U.S.A.

If Your Jobber Cannot Supply You, Write Us Direct.

All In One Dressing
Aluminum Enamel
Battery Paint
Bearing Blue
Clutch and Brake
Compound
Enamel (Air Drying)
Enamel (Cylinder)
Cowl Ventilators

Rie Nie

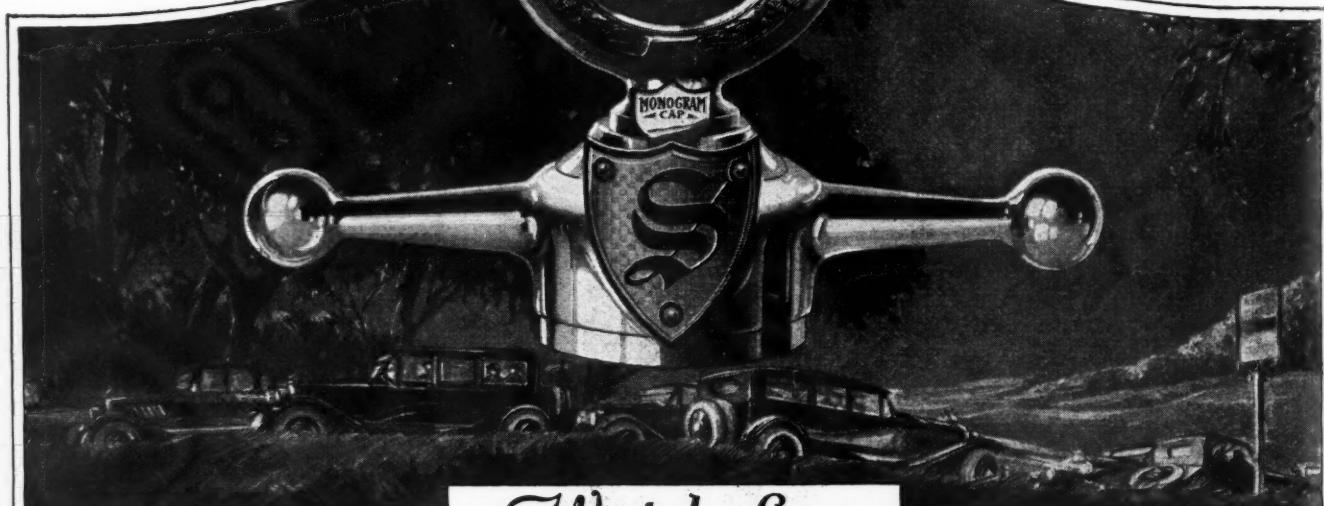
Fan Belts
Friction Tape
Gasket Cement
Graphite
Leather Dressing

AUTOMOTIVE PRODUCTS

Metal Polish and
Nickel Polish
Orange Shellac
Patch
Pedal Pants
Polish—Auto Body

Radiator Cement
Radiator Hose
Rim Paint
Rubber Cement
Rubber Filler and
Cement

Shellac (Gasket)
Spring Lubricant
Tire Mica and
Tire Talc
Tire Paint
Valve Grinding
Compound
Varnish (Clear Auto)
Rub-On Enamel



Watch for MONOGRAM CAPS

IF YOU will count the MONOGRAM Radiator Caps on the cars that pass, you will see why car owners and dealers everywhere prefer MONOGRAMS.

MONOGRAM Radiator Caps are nationally preferred—are nationally known—are nationally advertised.

The MONOGRAM Line is complete. It offers a selection of three distinct designs. Standard Bar Cap (as illustrated above); Royal Onyx, with ball ends of rarest imported multi-hued onyx; and new Wing Cap.

MONOGRAM Radiator Caps are Caps of individuality—they are made to carry the car owner's initial or fraternal emblem.

The reputation of the Kingsley-Miller Company is dependent on the quality of MONOGRAM Caps. We cannot afford to make anything less than the best.

No Tools Required for Installing

Remember, MONOGRAM Caps are automatically self-locking, protecting both temperature meter and Cap from theft.

The MONOGRAM Line is a profitable one for you because it does not tie up your capital in a big stock assortment of sizes. Our Caps are installed in a few seconds.

Be sure to provide for a big 1926 demand for MONOGRAM Locking Gear Shift Balls and Illuminated Gear Shift Balls. An assortment of bushings adapts these Balls to all cars. MONOGRAM Locking Gear Shift Balls lock automatically on the gear shift rod. Supplied in handsome dealer display carton containing twelve beautifully tinted Balls and an assortment of bushings.

MONOGRAM Cap prices are right—ranging from \$4.00 for the Junior Standard model to \$10.00 for the Senior Royal Onyx model. MONOGRAM Illuminated Gear Shift Ball, \$5.00. MONOGRAM Locking Gear Shift Ball, \$2.50.

*Ask your Jobber to show you MONOGRAM Radiator Caps and Gear Shift Balls
or write for descriptive literature*

THE KINGSLEY-MILLER COMPANY

600 West Jackson Boulevard

Chicago, Illinois

MONOGRAM
ORIGINAL
SELF LOCKING RADIATOR CAP



Dealers Are Enthusiastic
About This Better Pack-
age for a Better Chain.



A Step Ahead in *Merchandising* Tire Chains

The easier you make it for customers to buy tire chains, the easier it is to sell them. That is a fact. It has been proved in practice.

Even if WESCO Tire Chains were no better—even if they had none of their important improvements—it would be easier to sell them in neat, attractive cartons from a shelf where customers can walk up and want them.

Every driver **knows** that he needs tire chains. The trouble is that when he remembers, he's usually somewhere out on the road.

A WESCO stock reminds him when he's at your counter—where you make your sales.

Drop us a line and let us tell you more about merchandising tire chains. They're easy to sell.

Western Chain Company
Chicago, U. S. A.

Sales and Service Reference Number

MOTOR AGE
MAY 6th
ISSUE

***Of Exceptionally High Reference Value—Used Daily
—Lives for a Year. Following Are Indications of
Editorial High Spots***

¶The Best Years are Ahead

Leading editorial, reviewing briefly the progress of the automotive industry and looking into the boundless possibilities for profit that lie ahead.

¶101 Ways to Make Money in the Automotive Business

- 25 Money Making Used Car Ideas.
- 25 Money Making New Car Selling Ideas.
- 25 Money Making Accessory Selling Ideas.
- 25 Money Making Maintenance Ideas.

The 101st Idea—that's a secret until the issue is out.

¶More Cars—More Sales

How the rising curve of registrations leads to greater money making opportunities in all branches of the industry. This includes analysis of registration statistics.

¶The Big Road—1926 Model

The modern highway is the real automobile salesman. This article includes record of new highway construction in 1925 and that planned for 1926 in all the states.

¶Credit a Necessary Accessory in Three Out of Four Sales.

In 75 per cent of his car sales the dealer gets his pay from the banker. Importance of having satisfactory time payment arrangement. Some typical schedules for salesmen to use.

¶Launching a Dealership—Surveying the Field and Possibilities

First article of a series dealing with the problems of the merchant about to engage in new car selling for the first time, or contemplating change of location or line. How to analyze territorial possibilities.

It will be an issue of exceptional value to advertisers who want to impress the nation's consequential dealers and service station owners

For rates, etc., please address

MOTOR AGE

5 South Wabash Ave., Chicago

¶Servicing the 1926 Car

An article dealing with the new service problems and opportunities caused by oil cleaners, air filters, four-wheel hydraulic and mechanical brakes, balloon tires, and other innovations.

¶The Flat Rate Manual—10,000 Operations

1926 revised edition of the *Motor Age* Flat Rate Manual introduced in the SALES and SERVICE REFERENCE Number published last year. This manual will contain prices of more than 10,000 individual repair and maintenance operations.

¶Overhauling the Car for Owner Satisfaction and Dealer Profit

When and how to overhaul the passenger car under present-day conditions so the owner will be satisfied, and service shop will make a profit. Lower prices for better new cars have changed this situation. In this article will be indicated the limit beyond which it does not pay either from the standpoint of owner satisfaction or dealer profit to put money into overhauling.

¶Installation, Replacement and Adjustment of Timing Chains

A complete treatise of this subject from the maintenance standpoint.

¶New Car Directory

A compilation showing what there is to sell in the passenger car field. Last year's table brought up to date.

¶Some Things to Sell

Table showing accessory and equipment items LACKING on various models of leading makes of cars as they come from factory to dealer.

¶Electrical Equipment on 1926 Passenger Cars

A two-page table.

¶Miscellaneous Tables and all Regular Features

AUBURN



Public approval of the Auburn is apparent on every highway

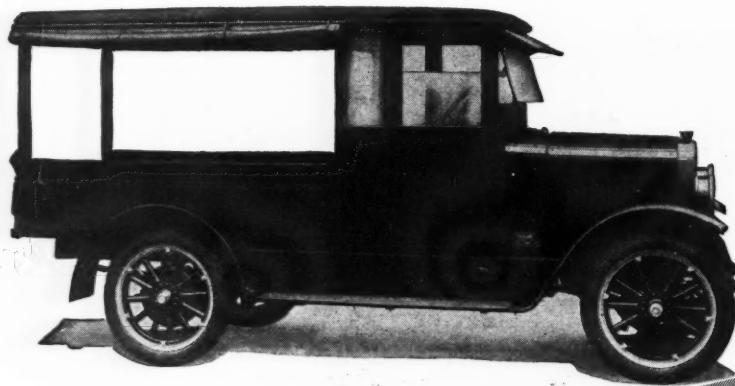
SO PRODUCTIVE of results has been the public enthusiasm for the present Auburn models that dealers in many places are still trying to make deliveries catch up with sales.

There is ample reason for this situation.

The buyer of an Auburn, regardless of model or number of engine cylinders, finds in his car—a combination of individuality of appearance and of high mechanical excellence plus the power of a Lycoming Motor.

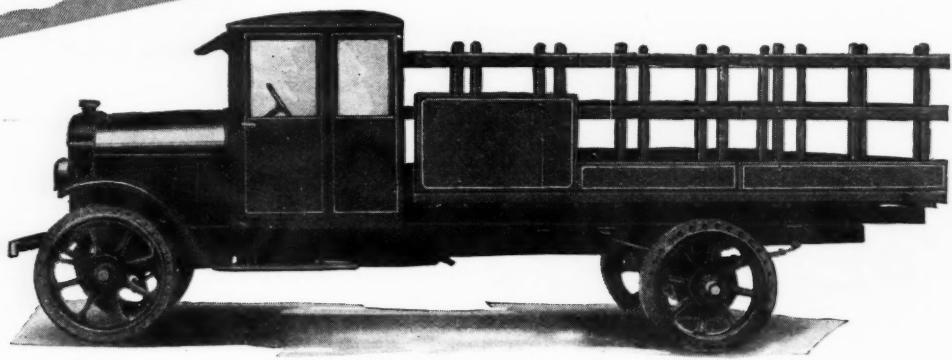
LYCOMING MANUFACTURING COMPANY
Makers of fine Fours, Sixes and Eights-in-Line
WILLIAMSPORT :: PENNSYLVANIA

LYCOMING
Motors
Years Ahead in Automobile Motor Efficiency



"Buddy"
*3/4 Ton Speed Truck
 \$895 Chassis*

A Big Brother for "Buddy" Stewart



**Stewart
 Big Six
 2½ Tonner
 MODEL 19**

Other Models

4 and 6 Cylinder Motors

1 Ton Speed Truck
 1½ Ton Speed Truck
 1½-2 Ton Speed Truck
 2 Ton, 3½-4 Ton
 Also 18 and 25 Passenger
 Bus Chassis

All Prices f. o. b. Buffalo

THESE two leaders in a complete line are proving big money makers for Stewart dealers. Many 4, 6, 8, 10 and even 12 year old Stewarts are still on the road.

"Buddy" has a six-cylinder 40 h. p. Continental motor. It exactly meets light delivery needs with low operating cost, and sells at a lower price than any truck of its size and quality.

Six-cylinder 2½ Tonner, Model 19. A heavy duty six-cylinder truck of 2½ ton capacity. Motor develops 65 h. p. on the block. It is ideal for slow, heavy work in congested districts or for long fast hauls on the open road.

Sixty-seven new dealers have signed the Stewart franchise in the last 60 days. Write or wire for our proposition.

**Hundreds of
 Stewart fleets
 have grown
 from a single
 Truck**

Stewart
 MOTOR TRUCKS

STEWART MOTOR CORPORATION, BUFFALO, N. Y.
 Export Branch: 90 West Street (Dept. 16) New York City. All codes used.

Far-Sighted Dealers Push These Tires— “NEMCO” Cords

Quality for quality, value for value, there is not the equal of “Nemco” Cords in the tire industry today—bar none. You can place them beside the highest priced tires on the market and be sure of the most favorable comparison. The one big point you can emphasize when handling “Nemco” Cord Tires is that you are selling *mileage*—not merely a piece of rubber and fabric. Also a splendid margin of profit for the dealer in every sale, because our wholesale prices are based on quantity demand, and “Nemco” already enjoys a tremendous popularity with more than 35,000 dealers. Send coupon below for our 96-page catalog, “The Little Salesman” 88A, which contains full description and complete price list for “Nemco” Cords, “Nemco” Balloons and “Nemco” Heavy Duty Tires, sold with absolute

**12,000-Mile
Guarantee**



Full Protection Afforded by Our Rigid Dealer Policy

The new management of this old established company spares no effort or expense in order fully to protect its dealer customers. A special department, under the direction of a dealers' representative, absolutely controls the distribution of our catalogs. It is the prime purpose of this department to prevent these books from reaching the consumer's hands. The prices listed are strictly wholesale and promise a most attractive margin of profit, even allowing for keenest competition. Send for “The Little Salesman” 88A today. You will soon realize how we have helped build profitable businesses for so many thousand retail dealers in every state in the union. Write us on your letterhead or send us information proving that you are a dealer.

New England Mills Co.
Wholesale Distributors of Automobile,
Radio Supplies and Sporting Goods
851 Washington Boulevard • Chicago, Illinois



4000 Quick Selling Items at Lowest Prices

That's what “The Little Salesman” 88A contains. This book is filled from cover to cover with the fastest selling, highest standard articles in the whole field of automotive accessories, including radios and radio parts. Many nationally advertised lines are listed and all prices are at lowest possible levels. Everything stocked for prompt shipment and guaranteed to give complete satisfaction. Any dealer may have this book for the asking. Coupon brings your copy by return mail. On orders of \$75.00 or over we prepay the freight east of Denver. See our catalogue for full details.

Full Lines of
High Pressure Tires
Balloon Tires
Heavy Duty Tires
Water Cured Heavy Duty Tubes
Bumpers
A. C. Spark Plugs
Pistons, Gears, Springs

RADIO
Bremer Tully Sets
Thorola Sets
All-American Sets
Balkite Power Units
Burgess Batteries
Telefone and Utah
Speakers
Diatron Radio Tubes

SPORTING GOODS
Golf
Tennis
Baseball

DEALER'S COUPON

New England Mills Co., Dept. 67
851 Washington Blvd., Chicago

Send latest copy of your bargain book, “The Little Salesman,” including price list of all sizes on “NEMCO” Cord Tires, and your complete line of automotive and radio accessories and supplies. Also place my name on mailing list to receive your catalogs regularly as they appear every 4 weeks. We attach herewith letterhead or information to convince you we are entitled to dealer's prices.

Name.....

Address.....

Town..... State.....



Mr. Johnson is welcome because he is not merely another handshaker. He has always real news and definite ideas to contribute, and he brings to a conversation a fair-minded attitude and a keen intelligence.

He "gets about" a lot, and has a first-hand knowledge of the trade, of its latest developments, and of the goods you sell. He seems to be able to see things from your side of the fence.

Many men who welcome such a caller are neglecting interviews of even greater helpfulness—interviews with many Johnsons instead of one. Can you afford to miss "regular appointments" with the A. B. P. paper or papers that cover your trade?

Set aside—now—a definite time to go through your business paper carefully. You will find that it pays to set a time to go through every issue.

The membership of a publication in the Associated Business Papers, Inc., means that it conforms to the highest standards of editorial and advertising practice.

The editorial matter, written by experienced men who know the trade and who have "an ear to the ground", is measured by the standard: "Is it real news?" The paper is pledged, as all A.B.P. members are, to consider first the interests of the subscriber.

Readers can depend upon the character of advertising in an A.B.P. publication—upon the good faith and cooperation of the advertisers. Advertisers have found that it pays to make every honest effort to sell more goods by helping you to sell more.

THE ASSOCIATED BUSINESS PAPERS, Inc.
Executive Offices: 220 West 42nd St., New York, N.Y.

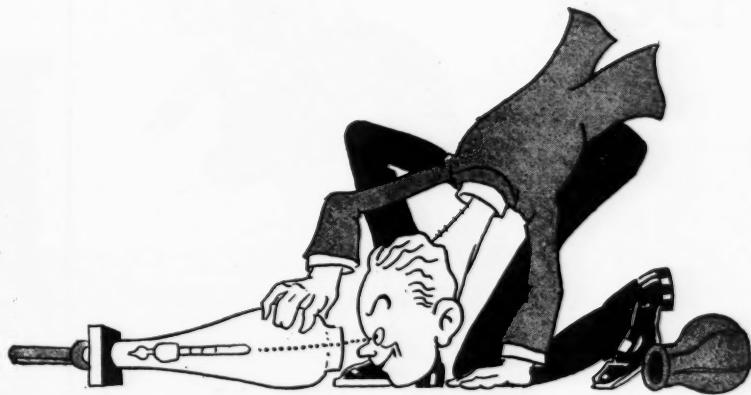
A. B. P.

An association of none but qualified publications reaching 54 fields of trade and industry.

MOTOR AGE is a member of The A. B. P.



KANT STICK BATTERY TESTER
"Unless the float is right, the reading is wrong"



Are *YOU* Seeing the Opportunity in Battery Testers?

In 1926—more than ever, all selling will be a matter of what you put into it.

Let us suggest a little test on your part to tie you up to the sweep of radio so that you can get your share of the three to four million battery testers that will be sold during 1926. A window display from time to time and counter displays all the time will do wonders as dealers everywhere are finding out.

And when you sell battery testers
—IN ANY PRICE CLASS
AND FOR ANY PURPOSE—
it pays to sell Scrantons. Scranton
Glass Instrument Co., Scranton,
Pa.



Square rubber collar
prevents rattling and
breakage. It is found
on every Scranton-made
Battery Tester.

SCRANTON

BATTERY TESTERS

Kant Stick
\$1.00 List

Ayanbee
75c List

Scranton
85c List

Sturdy
65c List

Sturdy Special
75c List

Pyro-Alcohol Radiometer List Price—75c
(Anti-Freeze Tester)

**Sell
!**



**The New
4-Tone
Exhaust
Horn**

Patented

Toot Sweet

TRADE MARK

It Makes Two Profits for You

You sell it—that's one profit. You install it—that's another. And both are well worth while. Toot Sweet is an easy seller. It's easy to install—and so far as making good is concerned, it's fully guaranteed.

You can do a lot of Toot Sweet business with an unusually small stock. The big thing about it is its turn-over. **A demonstration sells it!**

Mail the coupon for discount details

Illinois Brass Mfg. Co.
Chicago, Ill.

Illinois Brass Mfg. Co.,
224 No. Ada St.,
Chicago, Ill.

Please send full information on "Toot Sweet," the new 4-Tone Exhaust Horn.

Name.....

Street.....

City..... State.....

Specify Make of Car.....

.....

.....

.....

R·I·V
Ball Bearings



R. I. V. Says It With Cash

The R. I. V. ball-bearing proposition shows substantial bearing distributors more profit per sale than any other on the market made by a responsible company which can give service and delivery.

More Profit—that's SURE.

More Quality—that's *equally certain*.

And a "live-and-let-live" policy.

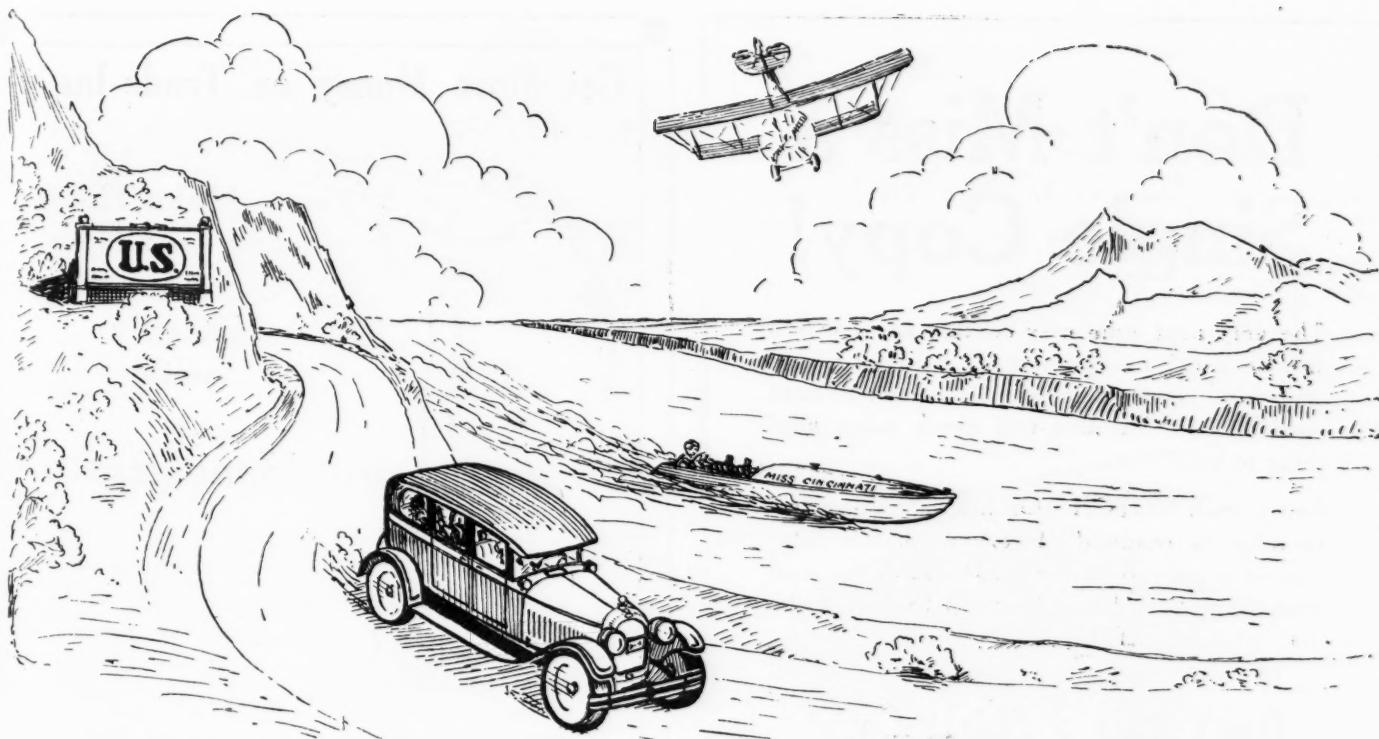
*We welcome inquiries—there
are good territories still open.*



Fisk Building

Broadway at 57th St., New York City

Branches—Detroit—San Francisco—Montreal



for All Maintenance Work
~ the
QUALITY Drill



Strange as it may seem, you are paying for U. S. Electric Drills every day—unless your shop is equipped with them. You pay either by not using electric drills or by keeping those you do use in repair.

It isn't possible to build finer drills than those in the U. S. line. Sturdy, compact, light in weight, durable—designed and made by the world's oldest builders of portable electric drills and grinders. Write for Catalog "H."



The United States Electrical Tool Company
 Cincinnati, Ohio, U. S. A.



**Portable Electric Drills
 Grinders-Polishers**

Oldest Builders of Electric Drills and Grinders in the World

All U. S. Drills are equipped at every vital point with SKF Ball Bearings.

Two pole trigger switch (patented May, 1914) cuts out both lines of current and eliminates arcing. An exclusive U. S. feature.

Silk covered armature wire insures better insulation than cotton covered wire ordinarily used.

The U. S. quarter inch Drill, as illustrated, sells for—

\$30.00

Don't Miss a Single Copy!

The very next issue may contain an idea that will be worth many times the price of a subscription! But unless you get a copy of next week's issue, the idea will never mean anything to you!

Every week MOTOR AGE has something new to offer its readers! Every week the automotive trade moves forward! And the man who doesn't read and keep up to date is the man who gets left behind!

Don't Miss a Single Copy! You Can't Afford to!

A Year's Subscription to MOTOR AGE
Only Costs You \$3.00

And Here's What You Get:

Fifty-two copies of the only weekly maintenance paper published in America. A weekly news service that is always up to the minute—all the news while it is news.

The right to use the Readers' Clearing House whenever you have a problem that needs personal attention—a service that is alone worth more than the cost of the magazine.

The real facts as to how other men are succeeding in a business just like yours. Proven ideas from all over the country—new ones every week.

New car descriptions the minute they are released.

Mechanical specifications, prices, and weights of all American cars brought up to date every week.

**Subscribe now
and be sure of
getting a copy!**

Get More Money on Trade-Ins!



MODEL "RF"
Spray Gun Complete
with Hose
\$35

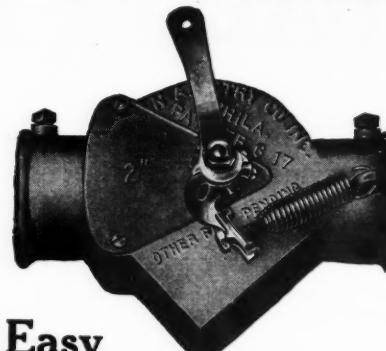
Make Them
Look Like New
Quickly and
Cheaply
with
THE
Handigrip

Perfect balance permits tireless working in difficult places and under trying conditions. Corners and curves are coated as velvet smooth as panels. Makes runs and sags unnecessary. Economical of air. Materials changed in 30 seconds! Gives fine line or wide swath with no change of parts. Test a Handigrip for 10 days. If then you are not satisfied that you can do better work in less time return it and have your money refunded.

PLUMMER-HUFF CO., Napoleon, Ohio

Manufacturers of Paint Spray Equipment

Not Sold as a Noisemaker



**Quick, Easy
Installation Makes More Sales!**

Installation of a Petry is a quick, easy job that makes total cost to your customers far less—hence you can sell more people more Petrys.

Petry Tuning Up Valves are scientific instruments for engine testing. Smooth in operation, do not chatter, leak or rattle—and cannot open accidentally. Pedal or dash operated types. You make a double profit on them—one on the sale, another on installation. Order a dozen from your jobber. If he doesn't have them write us direct.

N. A. PETRY CO., INC.

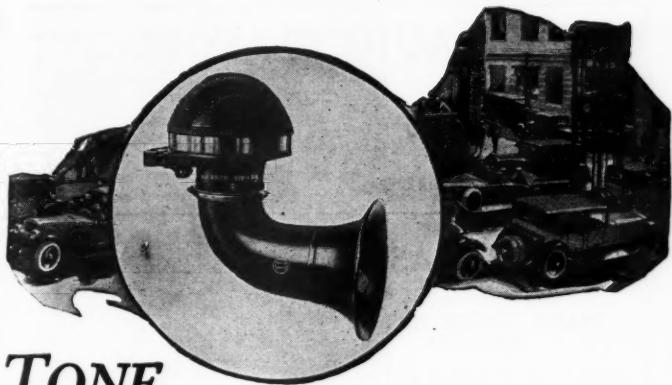
340 N. Randolph St., Philadelphia, Pa.

Pacific Coast Representative

NORMAN COWAN CO.

451 Rialto Bldg., San Francisco, Cal.

PETRY *Tuning Up* Valve



TONE

makes this horn truly...
"The voice of the fine car"

MUSICAL, yet positive in its warning—clear, vibrant, penetrating—the tone of the *Original* Bosch Horn is unlike that of any other warning signal.

The *Original* Bosch Horn is of the vibratory type. Its action is lastingly trouble-proof. No motor to wear out or give trouble. It is in every way up to the high standard of *Original* Bosch.

No wonder owners of fine motor cars are buying it, not only to replace worn-out equipment but often to put on the new car in place of the horn they find there.

Our dealers everywhere are finding this horn a quick selling and profitable item. If you are not already carrying it, write us for details of selling plan. You have the opportunity to do a neat business if you act quickly. Address: Robert

Bosch Magneto Company,
 Inc., 109 West 64th Street,
 New York. Chicago Branch:
 1302 South Wabash Avenue.



Note

No finer tribute can be paid the *Original* Bosch Horn than the way it is being imitated. But remember: the *Original* Bosch Horn owes its popularity to the high standard of materials and workmanship which characterize it and all *Original* Bosch products. To give your customers this quality, you must give them *Original* Bosch. Look for the name Robert Bosch and this trademark on all *Original* Bosch products. They are your guarantee of *Original* Bosch quality as known the world over since 1887.

The Original
Bosch

ROBERT • BOSCH • MAGNETO COMPANY • INC.

No connection whatsoever with the American Bosch Magneto Corporation

PRICES
 "Master" for large cars, motor busses and motor boats . . . \$25
 "Standard" for passenger cars \$21
 "Junior" for motorcycles . . . \$16

TWO FULL PAGES
 One right after another
SATURDAY EVENING POST
 May 15
LIBERTY—May 22



Write today for your supply of colorful window display material—just what you need to make a dotted line from Shaler's big nation advertising to your store.

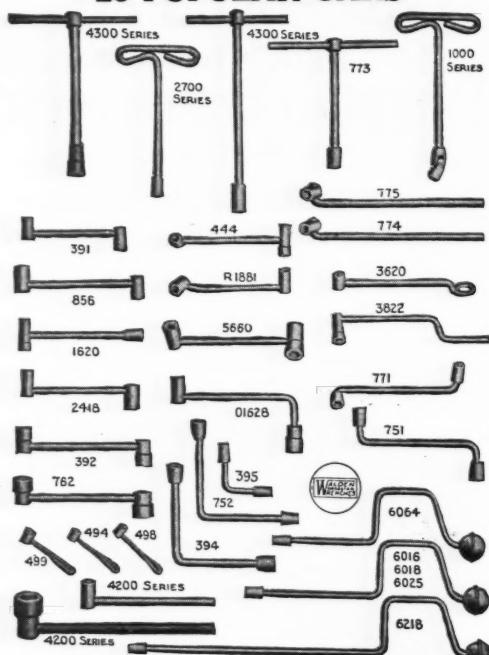
This advertising is teaching motorists the wonderful usefulness of the Shaler Vulcanizer for making emergency puncture repairs on the road. The display material in your window tells 'em you sell 'em, and brings 'em in to buy.

Besides the initial profit you are sure of steady, extra repeat profits on the automatic sale of Shaler Patch-&-Heat Unit that motorists keep coming back for, month after month, year after year.

C. A. SHALER CO., Waupun, Wis., U. S. A.

World's Headquarters for Tire Repair Equipment

THESE SOCKET WRENCHES
WILL SERVICE
25 POPULAR CARS



Ask your Jobber's salesman or write for catalog No. 50 illustrating our complete line of socket wrenches for automobiles, trucks and buses.

WALDEN-WORCESTER
The original, and longest exclusive manufacturers of All Steel, Socket Wrenches, in the World.
473 SHREWSBURY ST., WORCESTER, MASS., U. S. A.

Buy **SMOOTH-KUT** EXPANSION REAMERS
(TRADE NAME REGISTERED)

With FULL spiral flutes that shear metal clean.

They cut a round, smooth hole without chatter—keep an edge longer and are reground by us at cost.

Patented April 7, 1925.
Avoid inferior imitations.

Order through Jobber.

Millersburg Reamer & Tool Co., Millersburg, Pa.



TASCO
Gas Gauge for
FORD
CHEVROLET and
OVERLAND



Sells Quick at
\$1.25
Retail

THE AKRON-SELE CO.
Akron, Ohio

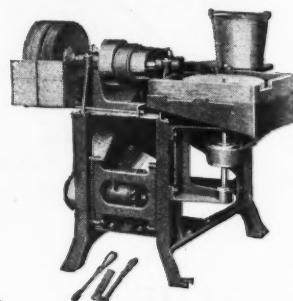
WEL-EVER
"OIL CONTROL" PISTON RINGS
The Motor Necessity That Has Made Good
Backed by Eight Years' Satisfactory Service
THE WEL-EVER PISTON RING CO., TOLEDO, OHIO
Sold most everywhere. If your dealer cannot supply you write us.

FAST AUTO GLASS EDGING

GRINDS
SMOOHS
AND
POLISHES
EDGES OF
AUTO GLASS

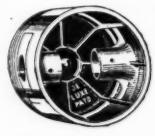
Write today—Dept. K
MAKE THESE EXTRA
PROFITS

HENRY G. LANGE MACHINE
WORKS
DEPENDABLE SINCE 1882



160 N. MAY ST.
CHICAGO

Judge for Yourself the Superiority of the
NEW IMPROVED DE LUXE



—Order a Set—

The DeLuxe patented system of ribbing is a structural unit on which we build the lightest and strongest cast iron piston made.

One DeLuxe-equipped job sells many more.

Send for our agency proposition and folder giving the 14 points of Superiority of the New Improved DeLuxe

The DeLuxe Products Corporation
1235 Lake St. LaPorte, Ind.

Standard Equipment on America's Finest Motor Cars

**A Complete Line
of Bearings**



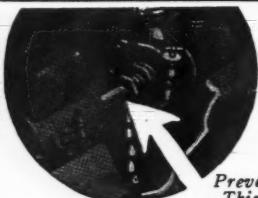
Angular Contact Thrust Bearings, Angular Contact Radial Bearings, and Thrust Ball Bearings of all types, are available for you through our manufacture. And the assistance of our Engineering Department is an added advantage without extra cost to you. Send us your blueprints and inquiries.

THE BEARINGS COMPANY OF AMERICA
LANCASTER, PENNA.
Western Sales Office—1012 Ford Bldg., Detroit, Michigan



POWERSTEEL AUTOWLOCK

E-197



**Stops Pump Shaft Leaks
Immediately and Permanently**

Conneaut Plastic Metallic Packing molds in the fingers to fit stuffing-boxes of any shape or size. It is a repair for the worn shaft and loose bushing. At your Jobbers in 1-pound and 5-pound cans; if not, write us.

CONNEAUT PACKING COMPANY
Conneaut, Ohio



QUALITY—PROFIT—TURNOVER

**American Hammered
Piston Rings**

American Hammered Piston Ring Company
Baltimore, Maryland

WELD ALUMINUM
Easier than cast iron by using
PIERCE'S ALUMINUM FLUX

It flows the metal together without puddling—saves time, labor and gas,—makes a better weld. Used by good welders everywhere. Any welder can successfully weld aluminum with this flux. Sold on a money-back guarantee. Price \$5.00 per lb. Delivery free in U. S. Manufactured and distributed by

R. H. PIERCE, 910 JEFFERSON STREET, EUGENE, OREGON

FOR
**BROWN-LIPE
GEAR CO.**

Transmissions and Clutches
Trucks, Busses Passenger Cars
QUICK SERVICE ON COMPLETE UNITS OR PARTS
BROWN-LIPE GEAR CO.
SYRACUSE, N. Y.

EATON SPRINGS
Formerly AMERICAN and PERFECTION Springs

There's an Eaton Spring made expressly to fit any car, truck or bus.

The Eaton Bumper & Spring Service Company
Cleveland, Ohio



BRAD-CUPS
The Perfect Spring Oiler
(Pat. 9-24-18)

Single Double

C. GOODWIN BRADLEY, Inc., Syracuse, N. Y.

Kawneer
SOLID COPPER
STORE FRONTS

Write for Special Book Garage Front
THE KAWNEER CO., 3324 Front St., Niles, Mich.



Good bye, buggy wheels

Budd Wheel Company Detroit—Philadelphia



Mallory
Ignition Coil

Has two primary windings instead of one. Gives a hotter spark, makes easier starting, gives more power, quicker pickup and more mileage. Try it on a sluggish motor. Write for full particulars.

The Mallory Electric Corporation, Toledo, Ohio.



BOLTS THE B.P. LINE BLUE PRINT BUSHINGS

"Made to Blue Print"
guarantees to the Replacement Trade the same high standard of Quality and Accuracy demanded by the car manufacturer.

B.P. The Fostoria Screw Co., Fostoria, Ohio



PROTEX
TIRE CHAINS

Protex Chain Co., Inc.
Waynesboro, Pa.

Absolutely Stop Skid
Many small horseshoes grip the road and prevent slip. The first scientific anti-skid device.

TIMKEN
Tapered
ROLLER BEARINGS

Simplicity
REBORER AND GRINDER

A big money-maker in any automobile repair shop or garage. Ask for free demonstration in your own shop.

Simplicity Manufacturing Company
Port Washington, Wisconsin



Packard
Cable

The Packard Electric Co.
Warren, Ohio



BRANCHES
AHLBERG BEARING COMPANY
321 EAST TWENTY NINTH STREET, CHICAGO ILLINOIS

SCHEBLER
*The World's
Finest* **CARBURETORS**

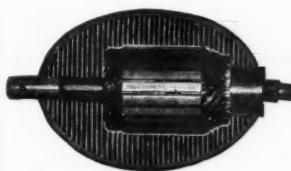
THE WHEELER-SCHEBLER CARBURETOR CO., INDIANAPOLIS, U.S.A.

"As Silent as a Shadow"

Quincy Compressors

Quincy, Illinois

J-538



FREDERICKS
Rewinding Service

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Haven, Pa.

Johns-Manville
ASBESTOS BRAKE LINING



**SPECIALTY
SALESMEN**

Sell the Dieringer Bushing Remover. Mechanics buy these tools on sight. Six sizes \$4.50. Liberal discount to hustlers.

E. T. DIERINGER
Box 282 Bolivar, Ohio

GATES VULCO
Fan Belts and Radiator Hose
Made By
The World's Largest Makers of Fan Belts



The SO-LO JACK

\$6.00 Retail
West of Mississippi \$5.50
4 1/4" LOW—HIGH 15 1/4"
The REAL Balloon Tire Jack
All Steel Construction
POWERFUL—STURDY—EASY TO OPERATE
A Sure Seller with your Trade
SO-LO JACK CO., Inc.
108 Massachusetts Ave., Boston, Mass.

HERE is highest radio quality at lowest price. A chance to get permanent distribution for complete Delano line.

The Delano Sheraton sells for \$75—has built-in Delano loud speaker—5 tubes—special Delano hook-up and mahogany cabinet that completely encloses entire set. Wire or mail coupon today.

DELANO RADIO

Modernola Co., Inc.
Johnstown, Pa.

Gentlemen: Please send me full details.

Name _____

Address _____

Tempered and nickel plated by our own exclusive process. Maximum strength, lasting beauty of finish. Write for catalog.

700 S. Pierce St. Milwaukee, Wis.

Gemco
BUMPER



KISSEL
CUSTOM BUILT
Kissel Motor Car Co., Hartford, Wis.



**The K-S GASOLINE
Telegage**



A gasoline gauge on the Dash. Note full page in colors in May 6th Motor Age, also half page this week's issue Saturday Evening Post. Write for description and proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street Ann Arbor, Mich.
Chicago Branch, 2450 Michigan Boulevard

**DILL
INSTANT-ONS**

Dust and Valve Cap
Off or On in 5 Seconds

The Dill Manufacturing Co. Cleveland, O.



They Won't Come Back

Those jobs won't come back showing oil passing, compression loss and crank-case dilution if you use a Hall Hone. The Hall makes cylinders both round and parallel. Ask your jobber.

THE HALL MFG. COMPANY
504 Hall Bldg., 1600-06 Woodland Ave.
Toledo, Ohio

CLASSIFIED ADVERTISING

PARTS

**HOUSE OF A MILLION
AUTO PARTS**

The largest stock of new and used car and truck parts in the world. We have everything. Always mention model and serial number in order. Write us. All inquiries answered promptly.

DOUGLAS AUTO PARTS CO., INC.
2003-5-7-9 South State St., Chicago, Ill.

PATENTS & PATENT ATTORNEYS

Attorney-at-Law and Solicitor of Patents

C. L. PARKER

Formerly Member Examining Corps, United States Patent Office

American and foreign Patents secured. Searches made to determine patentability and validity. Patent suits conducted. Pamphlet of instruction sent upon request.

McGill Building, WASHINGTON, D. C.

HELP WANTED

A sales organization with a record of success and years of experience selling automobile and parts manufacturers as well as all classes of jobbers is seeking one or more new automotive lines having merit. Commission basis. If you want distribution in Michigan and sales volume it will pay you to communicate with us. We invite your investigation. C. A. Parkham, care of Grinder Sales Company, 526 W. Fort St., Detroit, Mich.

AUTO PARTS

SAVES 50% TO 75% ON ALL CARS
New and Used Gears—Springs and Axles—Cylinders—
Motors—Rear Systems, etc. Wire or Write

INDIANA AUTO PARTS CO.
808-10 N. CAPITOL AVE., INDIANAPOLIS, IND.
LARGEST CAR WRECKERS IN INDIANA

May 6, 1926
will be the date of the
**SALES AND SERVICE
REFERENCE NUMBER
of
MOTOR AGE**

SALES MANAGER WANTED

Established Chain Manufacturer wants sales manager of automotive division. Man who has an acquaintance among the jobbing trade and can develop sales on the road as well as direct policies from office. Give full information concerning age, nationality, experience and compensation in first letter. Box 6264, Motor Age, 5 S. Wabash Ave., Chicago, Ill.

Here's What Another Dealer Says About Titanics

"Gentlemen:

I would like to say that I think so much of Titanic Springs that I sell them exclusively. I have had to replace only one Titanic in the two years I have been handling them. I have never been able to find their equal.

Yours truly,
J. H. Peters, Hannibal, Ill."



The Sign of Dependable Spring Service

This dealer is building a reputation for Dependable Spring Service which will class him as the Spring Expert in his community. And at the same time he is making good substantial profits on his spring business.

Write for the Tuthill Service Station

TUTHILL SPRING CO.
DEPT. 479, 760 POLK STREET
CHICAGO ILLINOIS

TUTHILL
TITANIC
Alloy Steel Springs



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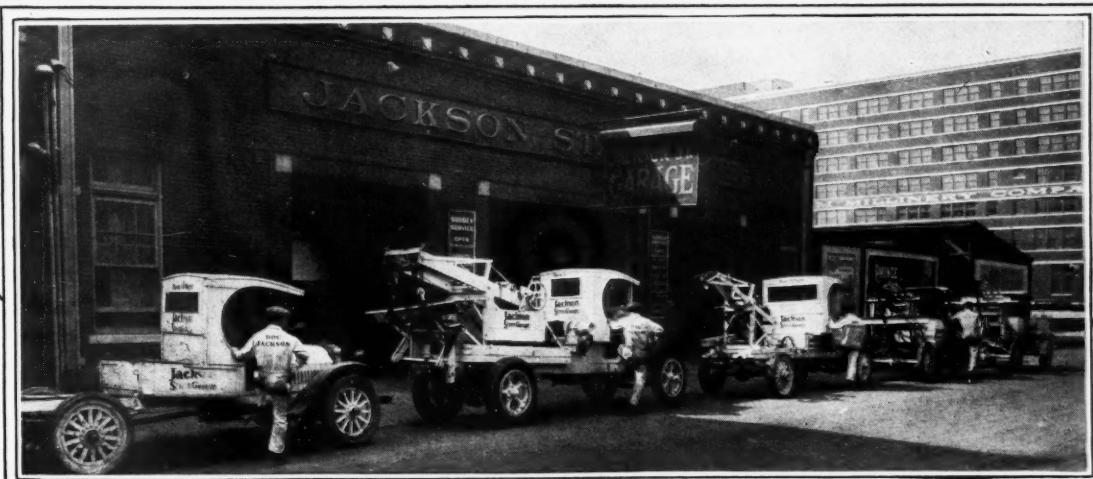
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